



**Mining &
Energy
Union**
VICTORIA

Pre-Budget Submission

MINING & ENERGY UNION

(A division of the CFMMEU)

VICTORIAN DISTRICT BRANCH

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Submission to the Australian Government

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About the Mining & Energy Union Victoria

1. The Mining & Energy Union Victoria represents workers in Victoria's Open Cut Brown Coal Mines, Coal-Fired Power Stations, Gas Power Generation and Hydro Electricity. The Mining & Energy Union represents approximately 85% of workers in this industry, which supplies more than 74% of Victoria's electricity consumption each year. Our Victorian Head Office is located at Morwell in the Latrobe Valley, where the bulk of Victoria's electricity supply is situated.

Energy Transition & Aging Power Stations

2. As we know the Australian electricity grid is undergoing a major transition aimed at tackling climate change and reducing greenhouse gases, in particular CO₂. This transition to date has meant that as coal-fired power stations close through age, they are not being replaced. Amongst recent closures of coal-fired power stations where we represent were the Morwell Power & Briquette, Anglesea, and Hazelwood power stations.
3. The closures of Morwell Power & Briquette and Hazelwood power station in the Latrobe Valley saw the loss of about 810 local full-time high paid jobs, which has had a significant economic and social impact on the Latrobe Valley community. Recently, EnergyAustralia announced that it will close its Yallourn power station in 2028, with an additional loss of up to 500 local full-time high paid jobs, further exacerbating the local economic and social impact for the Latrobe Valley community.
4. The closure of these coal fired power stations will see a loss of dispatchable electrical generation within Victoria of around 3,380 MW. It is very important to note that it is a fundamental requirement of the electricity grid to exactly match electrical supply with demand at every given instance to maintain a system frequency of 50Hz. A 5% deviation in system frequency will cause an immediate system black (system shutdown) which is designed to protect major electrical equipment from damage. This makes dispatchable generation essential for running a safe and reliable electrical power grid.

AEMO's Draft 2022 Integrated System Plan

5. AEMO's draft 2022 Integrated System Plan calls for 45,000 MW of dispatchable new battery and pumped hydro storage and 9,000 MW of dispatchable gas-fired generation to 'firm' up renewable energy penetration by 2050. This level of new dispatchable build within this timeframe, especially in an environment where renewables is depressing wholesale power prices, seems to be idealistic rather than realistically achievable, considering economic cost and engineering timeframes.
6. It should be also pointed out the batteries and pumped hydro storage are net users of electricity that require recharging from the electricity grid at about 85% efficiency. Additionally, gas generation still emits substantial amounts of greenhouse gases, which will be detrimental to Australia achieving zero greenhouse gas emissions by 2050.

7. Questions also arise as to why AEMO has decided to use gas generation as its preferred 'firming' option. This is especially so when gas can be used as an energy source more efficiently in people's homes or factories, thus reducing the amount of greenhouse gases that would need to be offset in 2050. Gas is also quite an expensive fuel for electricity generation and will become even more so if used to generate significant amounts of electricity thereby increasing demand on gas supplies.
8. There are other 'firming' options available that could have been chosen by AEMO, such as zero emissions Small Modular Nuclear Reactors (SMR) or High Efficiency Low Emission (HELE) coal-fired generation fitted with Carbon Capture & Storage (CCS), which both lead to better climate action outcomes and arguably cheaper electricity prices for consumers. Approximately 31 world countries have nuclear energy in their mix that allows them to firm renewables and deliver cheaper real world electricity prices than Australia. HELE coal with CCS could also take advantage of Victoria's 33 billion tonnes of readily available cheap Brown Coal reserves, which is currently mined for around \$5/tonne, with lower greenhouse emissions than gas generation.
9. While we acknowledge the Federal and State government's current ban on nuclear power might be a reason for AEMO not considering it, shouldn't a formal study be undertaken to determine if these bans need to be lifted, after all Australia has just signed on with the US and UK to build nuclear submarines that essentially are driven by SMR? Likewise, why isn't HELE coal-fired generation being considered if it is fitted with CCS? As far as we are aware AEMO's 'firming' choice of gas generation appears to have been by AEMO without any proper public economic, social, or technical discussion.
10. Nevertheless, additional new builds of dispatchable generation will be critical in the future to maintaining electrical system stability and reliability, if intermittent and variable renewable generation continues to increase its penetration within the electricity grid.

Re-Purposing Old Coal-Fired power station sites

11. Existing power station sites have considerable amounts of existing critical infrastructure, which gives these sites considerable economic and technical engineering advantage in siting new dispatchable power generation builds. This existing critical infrastructure includes things like: 'Super-Bus' High Voltage transmission lines, cooling water supply infrastructure, drainage infrastructure, a heavy transport routes from the docks in Melbourne, a local highly skilled heavy industry workforce, local suppliers of goods and materials and EPA licenses to name a few.
12. The net result is that siting a new dispatchable power generator on an existing disused coal-fired power station site would be much cheaper, quicker an engineering viable than siting it elsewhere. This initiative would also assist our Latrobe Valley community to transition away from coal while minimising the economic and social impacts on the population and local businesses.

Case for a Feasibility Study

13. In 2022, there is an exceptional and unprecedented case for the government to provide specific funding for special studies on how to cushion the effects on society and the workforce of Australia's transition to a decarbonised economy. This applies in all regions such as the Latrobe Valley where the electricity industry and affected communities are threatened by closures of dispatchable generation facilities.
14. The need for studies is supported by evidence presented in 2021 to the Parliamentary Inquiry into Dispatchable Generation. The final recommendations of this Inquiry have not yet been published by the Parliamentary Committee. However, this should not delay the setting aside of specific funding for crucial work of this nature. The studies should include government-funded studies into alternative power generation facilities and how existing infrastructure can be repurposed in the most cost-effective way.
15. In the case of nuclear, the government should provide all funding until such time as the moratorium of nuclear generation is relaxed – when the private sector could be expected to step in to play a part.
16. **For the 2022 Budget**, we submit that an amount of **\$2,000,000** should be allocated for this work.

Need for a Latrobe Valley Feasibility Study

17. As the Latrobe Valley is severely impacted by the rapid transition away from coal-fired power generation, and has minimal industry diversification, it is in critical need of a transition plan going forward that provides for a 'just transition' for workers and their community.
18. To determine the best option for dispatchable power transition a comprehensive and valid feasibility study by experts is urgently needed. Our Union believes that the Latrobe Valley would make an ideal case study for a feasibility study because we believe our members and their community would readily accept the HELE coal fitted with CCS or SMR alternatives, which may not be the case elsewhere.
19. We believe that the feasibility study should directly compare four options for dispatchable power generation, with these being:
 1. Gas Turbine Open Cycle
 2. Gas Turbine Combined Cycle
 3. HELE coal with CCS
 4. Nuclear SMR
20. The feasibility study should look in detail at each dispatchable option that could be built on a disused Latrobe Valley coal-fired power station site and should directly compare the following:
 - Future greenhouse emissions

- Capital cost of construction
- Timeframe for construction through to commercial operation
- Total direct local jobs created by each option, including flow on jobs
- Total economic value to the local community of each option
- Likely total electricity cost of each option for consumers, including consideration of future increased wholesale gas prices.

Conclusions

21. Considering Australia's aging coal-fired power stations, the current transition of the Australian electricity grid, Australia's future zero greenhouse emission targets and a system critical need for dispatchable power, a feasibility study needs to be conducted to determine the best replacement options. Australia has also made a commitment at the Paris Climate Accord to ensure a 'just transition' for workers and their communities who are directly affected by this transition away from greenhouse gas emissions.
22. It is an economic and engineering 'no brainer' to re-purpose old coal-fired power station sites into new dispatchable generation sites but which generation type will provide the best holistic option? The only way to objectively determine this is through a proper feasibility study, independent from AEMO. The Mining & Energy Union seeks your government's support to fund such a study in the best interests of the Latrobe Valley community, Australian electricity consumers and Australian industries reliant on affordable electricity.