

Media background: Hazelwood closure



Media background: Hazelwood closure 27 October 2016

Hazelwood power station, located in Victoria's Latrobe Valley, is a 1600 megawatt (MW) brown coal generator made up of eight 200 MW units constructed between 1964 and 1971. It was originally scheduled to be retired in 2005.

Hazelwood is jointly owned by [ENGIE](#) (formerly GDF Suez), with a 72 percent share, and [Mitsui & Co.](#) with a 28 percent share.

ENGIE has committed to making climate a priority by signing onto the COP 21 Business and Climate Summit.¹ In May 2016, CEO Isabelle Kocher said the company was reviewing its remaining coal plants one by one and would close those with the most outdated technology.²

The largest shareholder in ENGIE is the French government, which owns 33 percent of the company. The French Environment Minister said ENGIE would 'disengage' from Hazelwood power station during a documentary that aired on French TV in May 2016. The Minister's response came after receiving a petition about the Hazelwood mine fire from Environment Victoria.³

Pollution

Hazelwood is Australia's 'dirtiest' power station, meaning it produces the most carbon dioxide for the amount of electricity it generates. At 1.56 tonnes of CO₂ for each megawatt hour of electricity, it is 50 percent more polluting than the average black coal power station in NSW or Queensland. Hazelwood emits 14 percent of Victoria's annual greenhouse gas emissions and 3 percent of Australia's greenhouse gas emissions.

The closure of Hazelwood power station could reduce Victoria's annual climate pollution by 16,000,000 tonnes – an essential step towards the rapid reduction in greenhouse gas emissions required to avoid the worst impacts of climate change.

Each year, Hazelwood uses 27 billion litres of water and emits 7800 tonnes of hydrochloric acid. It's also in the top five biggest polluters in the country of toxic fine particulate matter (PM 2.5),⁴ which is a significant danger to human health.

Health impacts

Burning coal is responsible for approximately 95 percent of air pollution in the Latrobe Valley, according to the Victorian Environment Protection Authority (see graph below, submitted to the Hazelwood Mine Fire Inquiry).

¹ <http://www.engie.com/en/engie-makes-climate-its-priority/>

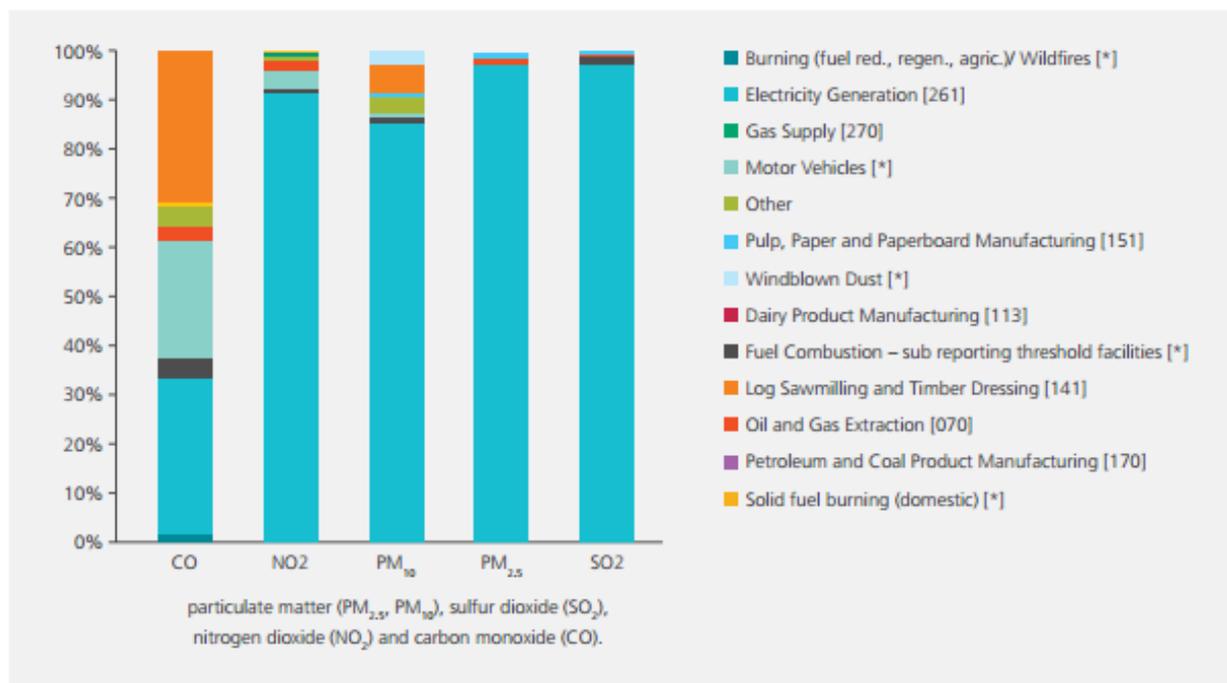
² <https://www.reuters.com/article/engie-coal-australia-idUSL5N18M5PF?type=companyNews>

³ <http://www.theage.com.au/victoria/french-government-signals-end-of-victorias-hazelwood-coal-plant-20160526-gp4bbv.html>

⁴ <http://www.npi.gov.au/>



Media background: Hazelwood closure



Source: Response of the Environment Protection Authority to the Hazelwood Mine Fire Inquiry, 20 November 2015, annexure 1, p. 2

Stopping air pollution has immediate health benefits to those breathing the air. Air pollution contributes to the premature death of over 3000 Australians every year, with coal a major contributor.⁵

The risk of premature death for people living within 50 kilometres of coal-burning power stations can be as much as 3-4 times that of people living at a greater distance.⁶

In 2014 part of the coal mine that supplies Hazelwood power station caught fire. It burned for 45 days, blanketing the surrounding area in toxic smoke. 11 premature deaths were attributed to the mine fire,⁷ a finding vindicated by the Hazelwood Inquiry.⁸

Air pollution from the normal operations of Hazelwood alone has been estimated to kill at least 18 people a year in Gippsland, and make many more people sick. The estimated annual health burden on the community of Hazelwood's air pollution is \$100 million each year, calculated using methodology developed by the US National Academy of Sciences.⁹

⁵ <http://www.smh.com.au/environment/3000-deaths-caused-by-air-pollution-each-year-prompt-calls-for-tougher-standards-20151113-gkygv1.html>

⁶ http://caha.org.au/wp-content/uploads/2010/01/Climate-Council_HealthEffectsofCoal_WEB-PDF.pdf

⁷ <http://www.abc.net.au/news/2014-09-12/hazelwood-mine-fire-pollution-blamed-for-11-deaths/5740824>

⁸ <http://www.abc.net.au/news/2015-12-09/hazelwood-mine-fire-likely-caused-latrobe-deaths-inquiry-finds/7004546>

⁹ http://environmentvictoria.org.au/sites/default/files/Hazelwood%20Report_Social%20cost%20of%20carbon.pdf

Media background: Hazelwood closure



The need for a planned transition away from coal

It is widely accepted that a government-led plan is needed to manage the phase-out of coal-burning power stations, as part of a comprehensive plan to deal with global warming. Burning coal is responsible for around 50 percent of Victoria's climate pollution and over 30 percent of Australia's climate pollution.

The Australian Energy Market Operator, which controls the National Electricity Market (connecting Victoria, NSW, Queensland, Tasmania, South Australia and the ACT), has estimated that meeting the current federal climate targets will require the closure of 8700 MW of coal-burning power stations before 2030.¹⁰

Calls for a plan to manage the phase-out of coal-burning power stations are coming from diverse sources.

The Chief Finance Officer of AGL has said that "a planned phase-out of coal plants is needed to *reduce* the risk of blackouts, because it will send a signal to the market that more renewable energy should be built."¹¹

Another AGL spokesperson has said "Policies that support the decarbonisation of the Victorian generation sector are welcome but it is critical the policy provides a clear pathway for a stable and orderly transition."¹²

A spokesperson for EnergyAustralia (owners of Yallourn power station) has said "We need an orderly, realistic transition from large, older coal-fired power stations."¹³

The Business Council of Australia has said "Victoria needs a managed transition away from coal-fired electricity generation. Given the profile of Victoria's coal-fired generation fleet, a more managed transition policy would seek to minimise the risks of this transition on system security and individual communities throughout Victoria."¹⁴

Professor Ross Garnaut (former Australian climate advisor) has called for Latrobe Valley power stations to be phased out within five years. "We have to get emissions from brown coal generation quickly onto a downward path... we could replace coal generation from other sources through a combination of energy efficiency and renewable energy generation."¹⁵

Indeed, a number of studies have shown that there are no technical barriers to powering Australia with 100 percent renewable energy – most recently from the Institute for Sustainable Futures at the

¹⁰ <https://www.aemo.com.au/media/Files/Other/consultations/nem/2016%20Consultation%20%20NTNDP.pdf>, section 3.1.2

¹¹ <http://www.afr.com/business/energy/electricity/agl-energy-warns-of-blackout-risk-without-orderly-brown-coal-plant-closure-20160616-gpl73c>

¹² <http://www.latrobevalleyexpress.com.au/story/3978056/win-for-renewable-energy/>

¹³ <http://www.latrobevalleyexpress.com.au/story/3978056/win-for-renewable-energy/>

¹⁴ <http://www.bca.com.au/publications/victorian-renewable-energy-auction-scheme>

¹⁵ <http://www.abc.net.au/radionational/programs/breakfast/australian-carbon-price-inevitable-garnaut/6985734>



Media background: Hazelwood closure



University of Technology Sydney.¹⁶

Employment

Hazelwood employs 495 people directly and on average around 300 contractors.¹⁷

Unions, community groups and environment organisations have called on ENGIE to ensure workers receive their full entitlements. They have also asked other companies that own coal power stations in the region, EnergyAustralia and AGL, to work with ENGIE to implement a “workplace portability” scheme.¹⁸ This encourages older workers across the fleet to take redundancy packages, allowing younger workers at Hazelwood to transfer and remain employed at other power stations.

The Victorian government has already committed \$40 million to support economic transition and has indicated that this is just the beginning. The federal government has hinted at support in the media,¹⁹ but no detailed plan or funding has been announced.

ENGIE is under a legal obligation to rehabilitate the mine site. This work could employ up to 200 workers for a decade, drawing largely from current Hazelwood staff.²⁰

Life after coal

A new report from Environment Victoria, *Life After Coal: Pathways to a just and sustainable transition for the Latrobe Valley*,²¹ details how an effective transition could take place.

Drawing on experiences in other regions, the report found that successful transitions are led by the community and supported by governments. There are a number of options for creating new and sustainable economic activity in the Latrobe Valley, including the development of a home energy efficiency retrofit program for Gippsland, which could create up to 620 jobs and reduce the cost of living for households.²²

Energy prices

The wholesale electricity price is set by the most expensive source of electricity – typically gas power stations. Leading energy market analysts RepuTex have modelled the effect of closing a large brown coal power station and found that removing Hazelwood would not necessarily push prices up.

¹⁶ <https://www.theguardian.com/environment/2016/apr/19/modelling-shows-move-to-100-renewable-energy-would-save-australia-money>

¹⁷ <http://hazelwoodinquiry.vic.gov.au/wp-content/uploads/2015/08/GDF-SAE-Submission.pdf>

¹⁸ <http://www.theage.com.au/victoria/hazelwood-shutdown-victorias-dirtiest-power-station-set-to-close-early-next-year-20160923-grn0ph.html>

¹⁹ <http://www.heraldsun.com.au/news/victoria/hazelwood-power-station-up-to-200-workers-may-remain-employed-for-decade/news-story/25da1e696a07f1984c005cb00cb821b2>

²⁰ <http://www.heraldsun.com.au/news/victoria/hazelwood-power-station-up-to-200-workers-may-remain-employed-for-decade/news-story/25da1e696a07f1984c005cb00cb821b2>

²¹ <http://environmentvictoria.org.au/newsroom/report/life-after-coal>

²² <http://environmentvictoria.org.au/newsroom/report/life-after-coal> p.26.



Media background: Hazelwood closure



“The closure of a large coal generator is likely to have a negligible impact on residential electricity bills,” said Bret Harper, associate director of research at Reputex.²³

This is consistent with analysis by academics at the Australian National University, which similarly found closing a large brown coal power station would have only a very small impact on prices.²⁴

A report from the University of Technology in Sydney found that transitioning Australia to 100 percent renewable energy by 2050 would cost less than continuing on the current path.²⁵

As coal power stations are phased out, increasing amounts of renewable energy will be built. The wind blows for free and the sun shines for nothing, so once renewable energy projects are built they are very cheap to run. This means they can provide electricity at much lower cost than coal power, and ultimately this will push electricity prices down – even Tony Abbott’s hand-picked review of the Renewable Energy Target said this.²⁶ The technologies are getting cheaper and cheaper, meaning the costs fall even further.

For example, the cost of building solar plants has fallen by 25 percent in the last five months.²⁷ From 2009 to 2014, the price of photovoltaic solar panels dropped 80 percent, and wind turbines by a third.²⁸

Lights will stay on

It is widely accepted that the National Electricity Market has more electricity generation capacity than is needed.

Hazelwood has historically generated about 11-12 terawatt-hours of electricity each year.²⁹ This is approximately 5 percent of energy generated in the National Electricity Market. Other, cleaner sources of electricity generation are able to increase production to supply generation lost from Hazelwood.

In 2015, it was estimated that Victoria had 2000 MW more power supply than will be needed.³⁰ Hazelwood is 1600 MW.

Victorian Energy Minister Lily D’Ambrosio recently told *The Australian* “Victoria’s oversupplied energy market will be able to cope with the closure of the Hazelwood coalmine”.³¹

²³ <http://www.reputex.com/media-releases/media-release-cost-of-closing-brown-coal-generation-offset-by-falling-retail-electricity-prices/>

²⁴ https://ccep.crawford.anu.edu.au/sites/default/files/publication/ccep_crawford_anu_edu_au/2015-11/ccep1510_0.pdf

²⁵ <https://www.theguardian.com/environment/2016/apr/19/modelling-shows-move-to-100-renewable-energy-would-save-australia-money>

²⁶ <http://webarchive.nla.gov.au/gov/20150403183612/http://retreview.dpmc.gov.au/ret-review-report-0>

²⁷ <http://futurism.com/solar-power-cost-has-dropped-25-in-only-5-months/>

²⁸ https://www.irena.org/rethinking/IRENA%20REthinking_Energy_2nd_report_2015.pdf p.12

²⁹ <https://theconversation.com/closing-victorias-hazelwood-power-station-is-no-threat-to-electricity-supply-66024>

³⁰ <http://ieefa.org/australias-east-coast-electricity-grid-dependent-sub-critical-coal-need-reform/>

³¹ <http://www.theaustralian.com.au/national-affairs/state-politics/renewable-energy-to-cope-with-loss-of-coal/news-story/04fca743203d559715b7528cb579143f>



Media background: Hazelwood closure



The Victorian government's Renewable Energy Auction Scheme will see 5400 megawatts of new renewable energy built in Victoria alone by 2025 and 1500 MW by 2020.³² This 5400 megawatts could produce approximately 30 percent more energy than is currently delivered by Hazelwood.³³

What needs to happen next?

While Australia has enough excess electricity generation capacity to cover the closure of Hazelwood, it is vital Australia puts in place a strategy to modernise its electricity system, starting by closing the most polluting power stations.

Federal Ministers Greg Hunt and Josh Frydenberg have indicated that the Turnbull government prefers a "leave-it-to-the-market" approach, pointing to the closure of eight coal power stations in the past few years as evidence that intervention is not required.³⁴

Unfortunately, such an approach does not necessarily achieve an optimum outcome from a carbon emissions perspective (e.g. if the lost capacity from a less polluting plant is taken up by a more polluting plant, emissions could actually rise).

Leaving it to the market also risks leaving coal communities in the lurch. There is no way of knowing where the next power station retirement will occur, fuelling speculation and anxiety. Without this certainty, it is also easier to pretend that any given power station will not close, thus weakening efforts to plan for life after coal. This ultimately hurts the community.

Environment Victoria's new report *Life After Coal* explores these themes further.³⁵

Victorian support for closure

A ReachTEL Poll³⁶ commissioned by Environment Victoria in June 2016 found that 70 percent of Victorians think governments need to plan the phase-out of coal plants as part of a comprehensive plan to deal with global warming. People expect responsible governments to show leadership on climate change and provide tangible support to communities.

For further information:

Mark Wakeham
CEO
Environment Victoria
m.wakeham@environmentvictoria.org.au
03 9341 8127 / 0439 700 501

Dr Nicholas Aberle
Campaigns Manager
Environment Victoria
n.aberle@environmentvictoria.org.au
03 9341 8112 / 0402 512 121

³² <http://www.vic.gov.au/news/victorian-renewable-energy-auction-scheme.html>

³³ Assuming 4400 MW of wind, at 0.35 capacity factor, and 1000 MW of solar at 0.2 capacity factor.

³⁴ <http://www.abc.net.au/am/content/2016/s4532539.htm>

³⁵ <http://environmentvictoria.org.au/newsroom/report/life-after-coal>

³⁶ <http://environmentvictoria.org.au/media/strong-support-phasing-out-polluting-coal-plants-victoria's-key-marginal-seats>

