LOCK THE GATE ALLIANCE

AUSTRALIANS WORKING TOGETHER TO PROTECT OUR LAND, WATER, AND FUTURE

Nic Clyde
NSW Community Coordinator
Lock the Gate Alliance

23 July 2021

Submission: Hume Coal Project and Berrima Rail Project (SSD 7172 & SSD 7171)

Thank you for the opportunity to make a submission on this Project.

Lock the Gate Alliance is a countrywide network of landholders, First Nations people, conservationists and townspeople concerned about the impacts of coal and unconventional gas on landscapes, water resources, culture, wildlife and people.

We oppose this Project for all of the reasons outlined in NSW DPIE's assessment report. We agree with NSW DPIE's finding that this Project is not in the public interest and should be refused consent.

We are concerned about the impact of this eleven-year process on the wellbeing of landholders and the broader Southern Highlands community and look forward to a determination from the NSW IPC that allows the community to use its considerable social capital to build the positive future they have described in presentations to the public hearing.

Whilst the bulk of our submission supports the Department's findings on this Project, we diverge on DPIE's somewhat ambivalent statements on the strategic need for new supply of metallurgical and thermal coal. Our submission is that new supply will not be required by industry and that the clear direction from the International Energy Agency is that no new coal, oil or gas developments are compatible with Paris Agreement goals.

1. Predicted groundwater drawdown impacts are unacceptable

A great deal of discussion has occurred regarding the disagreement between Hume Coal and NSW DPIE about whether or not predicted drawdown impacts on the aquifer would be "the most significant for any mining project that has been considered in NSW". A comparison with impacts that other projects have isn't a relevant consideration here: it is the merits of this project that the IPC must determine. The predicted groundwater drawdown impacts on a large number of groundwater users' bores are unacceptable and on these grounds, the project should be refused consent.

2. NSW has no legal framework for make-good agreements so the enforceability and effectiveness of proposed arrangements are limited.

Lock the Gate has been working with landholders affected by mining and exploration activities for many years. Our experience leads us to strongly agree with the Department that there is a "high likelihood" of considerable disagreement between Hume Coal and landowners about the actual impacts on water and make good arrangements. Indeed, given the level of opposition locally and the depth of concern that the proposed make-good arrangements are "not suitable or practical," we consider it a certainty.

Regarding make good commitments, we note DPIE Water's concerns that "importing water from other sources (either through piping or trucking in tanker loads) would be complicated and likely to have adverse effects on the local area."[1] Coal Free Southern Highlands and others are right to be concerned about the practicality of trucking or piping in vast volumes of water over many decades to fulfill make good commitments. Landholders in the Bylong Valley expressed similar concerns to the Commission during the assessment of KEPCO's mine proposal and we note that the Commission included in the Statement of Reasons for the refusal of that project, a finding that there was "uncertainty and insufficient information … as to whether the 'make good' requirements … are met."[2] Further, we note DPIE Water's comments to the Commission about the likelihood of impacts on private bores persisting for between 10 and 50 years post-mining.[3] The likely duration of significant impacts, the complexity and uncertainty of modelling and management and the uncertainty of the capacity of any responsible entity in future to make-good, all weigh in favour of refusal of this project.

3. Sydney's drinking water catchment

We share WaterNSW's concerns about the risks of an untested mining method impacting Sydney's water catchment and Hume Coal's failure to demonstrate that the project will have a Neutral or Beneficial Effect (NorBE) on water quality. We also note the agency's concern that while there may only be a "low likelihood" of contaminated discharges, the consequences would be "very high or severe for the sensitive Sydney Drinking Water Catchment."

"WaterNSW notes that there is no other mine in the Sydney Drinking Water Catchment that utilises the proposed unconventional mining method or extensive reinjection of mine water and coal rejects into the mine voids. This is a highly specialised technical area and there appears to be residual disagreement between the relevant experts about the likely safety and effectiveness of the unconventional

---

[1] Mitchell Isaacs, Director, DPIE - Water, 22 July 2020, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-7172%2120210608T055153.287%20GMT

[2] NSW IPC, 18 September 2019, Bylong Coal Project Statement of Reasons, Point 296

[3] DPIE Water mtg transcript, 19 July 2021, https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/transcripts-and-material/2021/hume-coal/210719_dpie-water-meeting-transcript-final.pdf

mining method and reinjection of mine water." [4]

Given the residual uncertainties and the risk of severe consequences, we agree with the Department that this development would not be consistent with the precautionary principle of ecologically sustainable development.

4. There is no strategic need for additional thermal coal supply from this mine

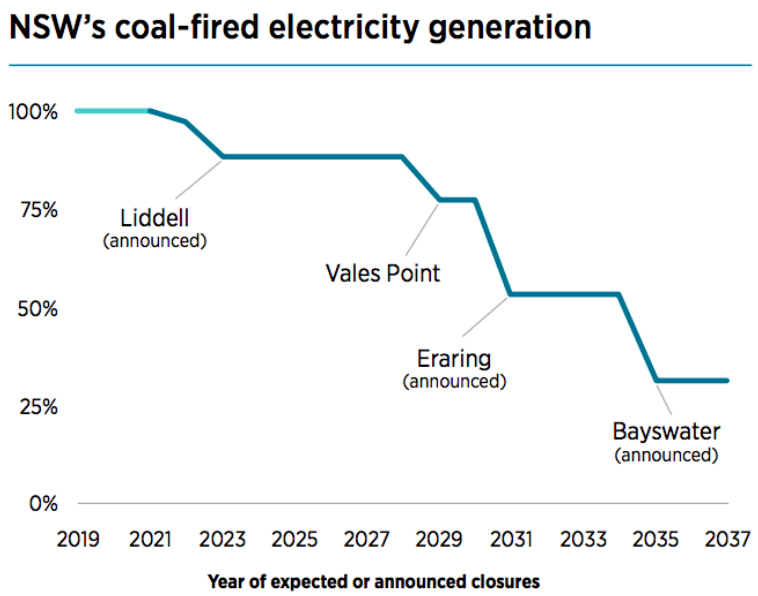
Some of the coal to be mined by this project is thermal coal. In its recent *Net Zero 2050 Roadmap*, the International Energy Agency (IEA) found that no new oil, coal or gas would be developed anywhere in the world under a pathway capable of preventing 1.5 degrees of average global warming (limiting warming to 1.5 degrees is an aim that the Paris Climate Agreement requires signatories to 'pursue'). The UN Secretary General has called for a phase out of thermal coal generation in OECD countries by 2030. The Australian Academy of Science has called for an acceleration of Australia's transition to net zero greenhouse gas (GHG) emissions over the next 10 to 20 years.

Regarding the domestic generation of power, the NSW Electricity Strategy acknowledges that four of the State's five remaining coal-fired generators "are set to reach the end of their technical lives and close by 2035, starting with the Liddell Power Station in April 2023".[5] There is reason to believe that these closures will be brought forward as continuing to operate existing coal-fired power plants becomes more expensive than building and operating new wind and solar generation.[6] With coal-fired power generation in NSW in structural decline, there is no need to expand local supply of thermal coal.

[4] WaterNSW, 21 September 2020, https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-7172%2120210608T055153.287%20GMT

[5] NSW DPIE, NSW Electricity Strategy, November 2019, https://www.energy.nsw.gov.au/media/1926/download

[6] Mike Foley and Nick Toscano, SMH, 2 July 2021, Falling cost of renewables creates coal test for federal government, https://www.smh.com.au/politics/federal/falling-cost-of-renewables-creates-coal-test-for-federal-government-20210701-p585xq.html



Source: NSW Electricity Strategy, November 2019

To illustrate just how fast the structural decline of thermal coal is occurring, just in the time between the public hearing for this project and the closing date for written submissions, Japan has announced new draft energy generation and climate targets that would see it's demand for thermal coal fall by about 40% by 2030. Last year, Japan was the top consumer of Australian thermal coal.[7]

5. There is no strategic need for additional metallurgical coal supply from this mine

As stated above, the IEA's *Net Zero 2050 Roadmap* found that no new oil, coal or gas can be developed anywhere in the world if we are to achieve net zero emissions by 2050 and prevent average global warming above 1.5 degrees. This applies to both thermal and metallurgical coal. As recently as two weeks ago, POSCO's Head of Steel Business Unit, Hag-Dong Kim said, "Tackling climate change is a critical agenda in achieving sustainable development for a better future."[8] The media release refers to South Korea's net zero commitment which "has inspired Korean companies to accelerate decarbonisation activities."

Coal industry lobbyists and proponents of new coal mine projects portray a transition to green steel-making globally as far into the future to argue that new coking coal mine supply is necessary. Justice Preston's judgement in *Gloucester Resources v Minister for Planning* found otherwise after hearing evidence on the issue. In February 2019, Preston accepted expert evidence from Tim Buckley from the Institute for Energy Economics and Financial Analysis. Mr Buckley advised the court that Gloucester Resources' optimistic assumptions about forward demand for coking coal did not "take account of changes in policy, financial markets and technology that will drive a reduction in GHG emissions in order to achieve the temperature targets

[7] SMH, 22 July 2021, Japan's clean energy push a threat to Australian coal, LNG exports, https://www.smh.com.au/business/companies/japan-s-clean-energy-push-a-threat-to-australian-coal-lng-exports-20210722-p58bzq.html

[8] POSCO media release, 8 July 2021, 'POSCO and Rio Tinto sign climate MOU', https://newsroom.posco.com/en/posco-and-rio-tinto-sign-climate-mou/

under the Paris Agreement." Mr Buckley cited the IEA's 2017 *World Energy Outlook'*s Sustainable Development Scenario (SDS) which modelled a decline in global demand for coking coal of about 39% relative to 2016 by 2040, driven by measures that must be taken under the Paris Agreement to limit climate change.

> *"Given the implications of the IEA's scenario forecast for a 40% or more decline in global coking coal demand by 2040, in my opinion there is sufficient existing production capacity, in operation or already approved and under development, to meet current and likely future market demand for coking coal, particularly as there is some scope for substitution between various grades of coal."*

Mr Buckley concluded by saying that a reduction in global supply is needed, "not new capacity beyond already approved mines."[9]

The IEA's *Net Zero 2050 Roadmap* confirms the analysis above which has already been accepted by the NSW Land and Environment court. The IEA found that new coal approvals are not compatible with achieving net zero by mid-century - a goal the NSW government shares - and that this reality requires a "major acceleration in clean energy innovation." To summarise the IEA's position on green steel, it finds that hydrogen-based steel production is currently at the large prototype stage and that if we are to achieve net zero this can and must reach the market in about six years time. The IEA says:

- reaching net-zero emissions will require the widespread use after 2030 of technologies that are still under development today;

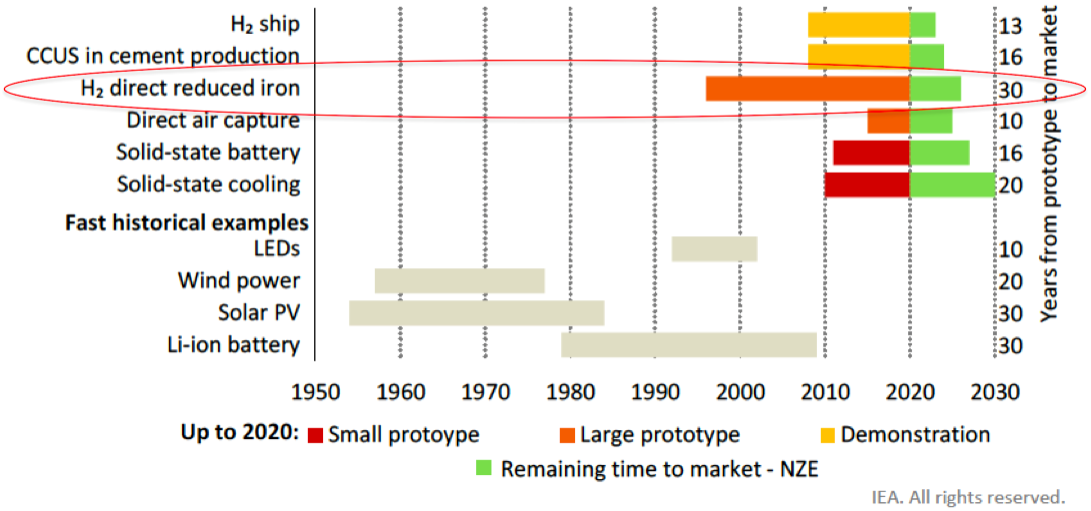
- major innovation efforts are vital in this decade so that the technologies necessary for net-zero emissions reach markets as soon as possible;

- hydrogen-based steel production … and other technologies at the large prototype stage reach the market in about six years.[10]

[9] Preston CJ, 8 February, 2019, Gloucester Resources Limited v Minister for Planning, points 468 and 469

[10] International Energy Agency, May 2021, Net Zero by 2050, pg 184

Figure 4.23 ▷ Time from first prototype to market introduction for selected technologies in the NZE and historical examples



Source: International Energy Agency, Net Zero by 2050, May 2021

Our advice is that analysts expect a massive step up in momentum as the EU, China, Korea, Japan and the US all move to implement rapid decarbonisation - including in the steel sector. Coking coal is clearly structurally challenged in this environment and the strategic case for this project is not made.

6. Wongawilli seam coal and Bluescope Steel

6.1. An independent review of coking coal supply availability and other alternative options for BlueScope Steel is required.

Several submissions draw a link between Hume Coal's proposal and Bluescope Steel. Our view is that the Commission does not have enough evidence before it to make any finding as to Bluescope's dependency on Wongawilli seam coal from Hume Coal's proposal. This is a complex issue which requires an independent study at arm's length from vested interests. Lock the Gate's view is that the Natural Resources Commission or the NSW Chief Scientist and Engineer should conduct a review of coking coal supply availability and other alternative options for BlueScope Steel, and that such a review should occur in time to inform any future decisions on future coal mine proposals in Sydney's drinking water catchment. Such a review would also need to consider the global transition to low or zero carbon steelmaking and the implications of this on the need for any new coal supply from the Southern Coalfields.

It is our submission at point 6.2 below that Bluescope Steel's future is not tied to Hume Coal's proposal and that viable, alternative options exist for Bluescope. Further, we note that NSW DPIE did not find nor suggest any significant dependency between POSCO's project and Bluescope's future at

Port Kembla.

6.2. **Hume Coal's expert report by Wood Mackenzie found that Bluescope's needs could be satisfied by the "redirection of coal from currently operating mines that was otherwise destined for the export market"**

Hume Coal engaged Wood Mackenzie (March 2020) to provide additional information on the coking coal market. Their market study examined the domestic supply needs of Bluescope at Port Kembla and Whyalla in South Australia:

"There is currently about 3 Mtpa of metallurgical coal contracted to the domestic market, which will rise slightly as Tahmoor South is commissioned, before dropping off as Dendrobium and then Metropolitan cease production with reserve depletion.

As a result of this declining supply outlook, Australia's steelmakers are likely to start contracting new production in the coming years to shore up supply for their mills. This can either come from the ***redirection of coal from currently operating mines that was otherwise destined for the export market*** *[emphasis added], or from new projects."* [11]

Lock the Gate's analysis is that approximately 30% of saleable metallurgical coal production in the Southern Coalfields was required to supply Bluescope in FY20. With greater production forecast for FY21, that percentage shrinks to about 27%. There appears to be ample local production to supply Bluescope for the foreseeable future, with no new production from Hume Coal required.

In the Hume Coal FAR, NSW DPIE reveals that in 2019, NSW produced "approximately 25 million tonnes" of metallurgical coal "for export and domestic use".[12] Lock the Gate has reviewed Annual Reviews by producers in the Southern Coalfield to get a snapshot of coking coal production, which currently sits at about 8-9 Mtpa of saleable coking coal. In 2019, Bluescope required 2.9 Mt of coal, of which 0.5 Mt was sourced from QLD.

Table 1: Saleable metallurgical coal production 2020 + forecast for 2021

Mine (NSW consent expiry date)	**Source**	**Saleable production of coking coal (actual) - 2020**	**Next Reporting Period (Forecast) Tonnes**
Tahmoor (2033)	AR 2020	1,338,913	2,013,421
Appin (2041)	AR FY20	3,180,000	3,847,000
Metropolitan (2032)	AR 2020	981,100	776,786

[11] Wood Mackenzie, March 2020, 'Hume Coal Market Report, Prepared for Hume Coal'
[12] NSW DPIE, June 2021, Hume Coal FAR, pg 40

Dendrobium (2024)	AR FY20	3,767,563	3,778,816
Total saleable coal (coking + thermal)		**9,267,576**	**10,416,023**
Total saleable coking coal		**7,878,063**	**8,890,860**

Notes:

1) According to BAEconomics (July 2020) the projected combined production from Appin and Dendrobium was 7Mt in 2019-20 and 8Mt in 2020-21 (South 32 2019a). Actual production in 2018-19 was 5.35Mt of metallurgical coal and 1.3Mt of thermal coal (South 32 2019b, p.32).[13] In FY20, about 80% of IMC's saleable coal production was metallurgical coal.[14]

2) The met coal totals in Table 1 above are approximate, allowing for an 80/20 split of saleable metallurgical vs saleable thermal coal from Appin and Dendrobium.

7. Port Kembla Coal Terminal's (PKCT) long-term viability will be determined by global demand for seaborne metallurgical coal supply, not by the NSW IPC's determination of this Project

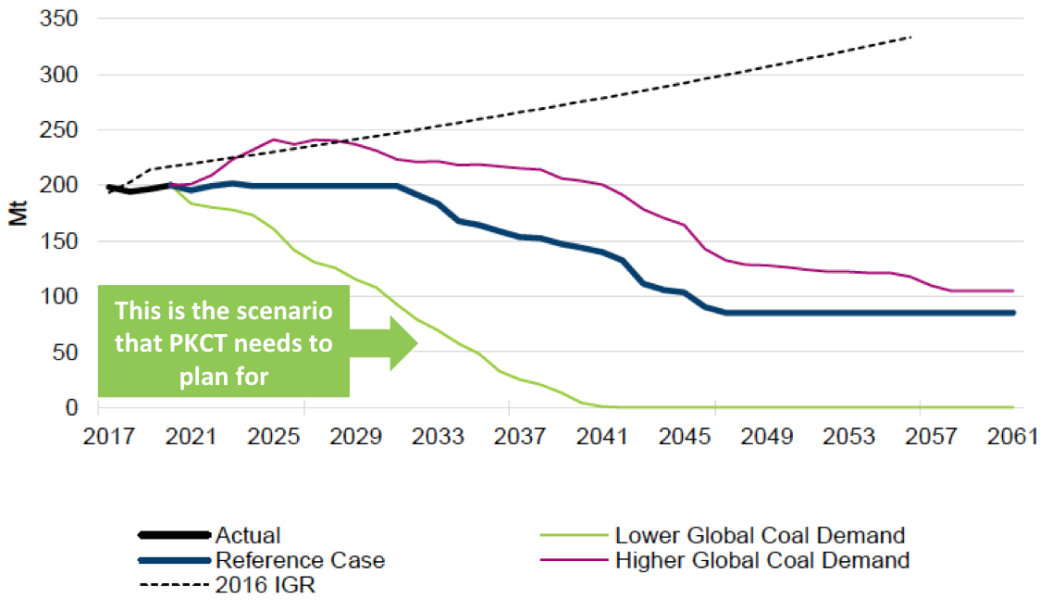
A technical report informing the NSW Treasury's Intergenerational Report 2021 found that global demand and domestic coal production in NSW is projected to be "significantly weaker" than predicted five years ago in the last NSW Intergenerational Report (IGR). It describes the factors underpinning weakening global demand for coal as "technological development and policy settings aimed at reducing greenhouse gas (GHG) emissions". It makes the common sense observation that global demand for NSW coal is "largely outside the control of the NSW and Commonwealth Governments."[15]

[13] Brian Fischer, BAEconomics, July 2020, Review of the Key Economic Interactions between the Dendrobium Mine and Related Entities in the Wollongong Region

[14] South32 Annual Report 2020, pg 47, https://www.south32.net/docs/default-source/sustainability-reporting/fy20-sustainability-reporting/2020-annual-report.pdf?sfvrsn=2f82e7cf_6

[15] NSW Treasury, May 2021, The sensitivity of the NSW economic and fiscal outlook to global coal demand and the broader energy transition for the 2021 NSW Intergenerational Report

Chart 3 NSW Treasury and Department of Regional NSW projected coal volumes (total tonnage)

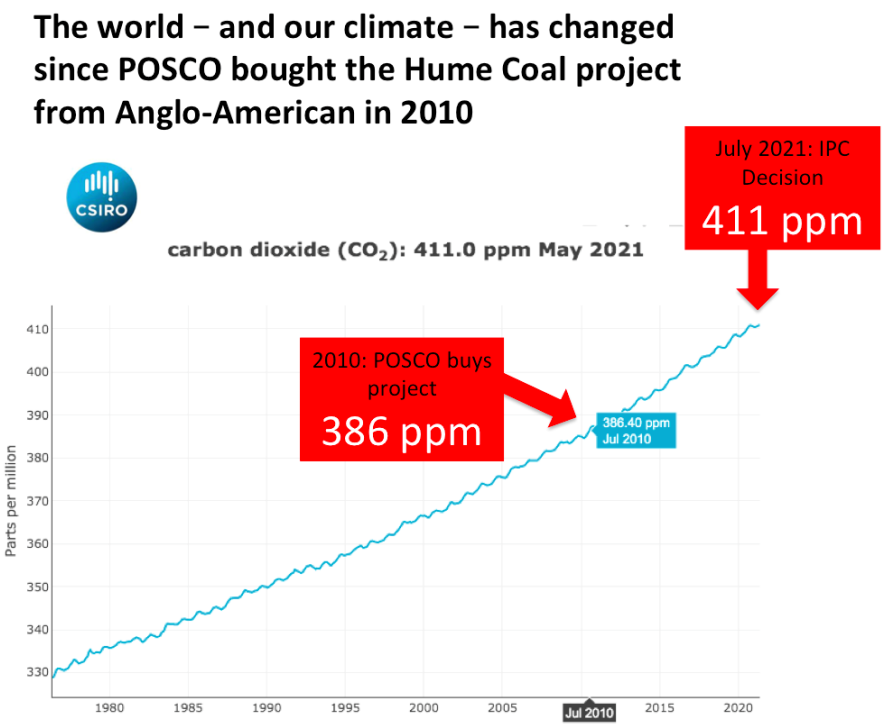


Source: NSW Treasury; Department of Regional NSW.

8. Greenhouse gas emissions

When POSCO acquired a majority stake in the Hume Coal Project back in July 2010, the global concentration of CO_2 in the atmosphere was 386ppm. Eleven years later, this concentration has increased by 25ppm to 411ppm. This represents a 9% increase on the pre-industrial level of 278 ppm just in the time that POSCO acquired and developed this project for assessment. In his Quarterly Essay 'Getting to Zero', former Chief Scientist of Australia Alan Finkel wrote that 411 ppm is "a level not experienced for 4 million years. And there is absolutely no hint of a slowdown."[16]

[16] Alan Finkel, March 2021, Quarterly Essay, GETTING TO ZERO - Australia's Energy Transition



In regard to the significance of GHG emissions from this project in the state, national and global context, we draw the Commission's attention to a recent judgement in the Federal Court on the Vickery Coal Project. The predicted emissions from the Hume Coal Project would be very similar to the additional emissions from the Vickery project. The Court found the Extension Project will, compared with the Approved Project, lead to the following levels of greenhouse gas emissions:

(i) an overall reduction of approximately 1 Mt of $CO_{2\text{-}e}$ in Scope 1 emissions;
(ii) an overall increase of approximately 0.15 Mt $CO_{2\text{-}e}$ in Scope 2 emissions; and
(iii) an overall increase of approximately 100 Mt $CO_{2\text{-}e}$ in Scope 3 emissions.

Table 6: GHG emissions predicted from Hume Coal's project

Table 6 | Project GHG Emissions

Scope	GHG Source(s)	Total GHG Emissions (tonnes CO2-equivalent)		
		Annual Average	Project Total	% of Total
Scope 1	On-site fuel use, ventilation gas	7,750	178,244	0.17%
Scope 2	Upstream electricity	67,479	1,552,006	1.5%
Scope 3	Downstream fuel and electricity	7,868	180,957	0.17%
	Downstream thermal coal use	1,908,329	43,891,559	41%
	Downstream coking coal use	2,645,838	60,854,284	57%
	Total (exc. Coal use)	**83,096**	**1,911,207**	**1.8%**
	Total (inc. coal use)	**4,637,263**	**106,657,050**	**-**

As DPIE's Table 6 above shows, GHG emissions that would be produced by Hume Coal - taking into account the GHG mitigation measures - are comparable to those

from the Vickery Extension. We ask the Commission to note that evidence on the Vickery Project's emissions was provided to the Federal Court by Professor Will Steffen. His climate change evidence was not contested by the Federal Minister for the Environment, Sussan Ley, with Justice Bromberg writing that "[n]either his expertise nor the opinions he gave were challenged." The weight of evidence resulted in Justice Bromberg making the following statement in his judgement:

"*As Australian adults know their country, Australia will be lost and the World as we know it gone as well. The physical environment will be harsher, far more extreme and devastatingly brutal when angry. As for the human experience – quality of life, opportunities to partake in nature's treasures, the capacity to grow and prosper – all will be greatly diminished. Lives will be cut short. Trauma will be far more common and good health harder to hold and maintain. None of this will be the fault of nature itself. It will largely be inflicted by the inaction of this generation of adults, in what might fairly be described as the greatest intergenerational injustice ever inflicted by one generation of humans upon the next.*"[17]

The Commission should refuse this project for the reasons already outlined here and in the Assessment Report but it should also add the contribution this project would make to greenhouse gas emissions among the reasons for refusal, citing the IEA's 2050 Roadmap and NSW's commitment to net zero emissions by 2050. Such a development is not consistent with the principles of ecologically sustainable development or NSW's climate change responsibilities and policies.

9. If an approval is contemplated, the public will have had no opportunity to critique draft conditions of consent.

We agree with the Department's position that residual risks from this project cannot be managed through post-approval conditions. This being the case, the Department did not provide any recommended conditions of consent. In the event the Commission disagrees with the Department's view, then it is necessary and appropriate for additional public consultation on draft conditions of consent to take place.

We note the Department's reply on 20 July 2021 in response to a request from the Commission on 7 July 2021 for "an overview of potential conditions which could be imposed to manage the impacts of the project." Whilst there is information in the public domain that outlines some generic conditions in relation to the management of groundwater, subsidence and mine worker safety, no draft conditions have been suggested regarding the management of all of the other impacts this mine would have. For example, significant new suggestions have been made both by DPIE and Hume Coal on the conditioning of Scope 1 and 2 GHG emissions. These are not mentioned at all in DPIE's 20 July 2021 correspondence with the Commission.

[17] Sharma & Others v Minister for the Environment [2021] FCA 560, https://equitygenerationlawyers.com/wp/wp-content/uploads/2021/06/Sharma-and-Others-v-Minister-for-the-Environment-2021-FCA-560.pdf

10. The Southern Highlands community deserves the positive certainty that only a refusal can deliver

An emphatic refusal will end eleven years of uncertainty and promote investment in preferred land uses including agriculture, rural-residential and tourism. We would like to draw the Commission's attention to the experience on the Liverpool Plains of those impacted by the Shenhua mine saga. NSW Farmers vice-president Xavier Martin was in the news recently. He farms about 25 kilometres away from the Shenhua Watermark land and told the Jimboomba Times that 13 years of uncertainty his community had to deal with had a profound impact on the district.

"For a start, there's a backlog of capital improvement across the landscape ... Farmers have been putting off building that new silo or replacing fencing. They didn't know what the future held in terms of quantity and quality of groundwater."[18]

We ask that you back the Southern Highlands community and end the uncertainty that this mine proposal has brought into their lives by refusing consent for Hume Coal's mine proposal.

In closing, we draw the Commission's attention to The Australia Institute's May 2017 report *For Hume the Bell Tolls*. At the time that report was written, interviews with local businesses revealed a deep concern that most of the Hume Coal Project's effects would be negative, including threatening the water supply, and that uncertainty around the mine was already reducing business investment:

"*The Southern Highlands' government, industry and community have a long-term plan for the region's economy which would take advantage of its environment, location and people, and maintain its natural environment and heritage. Coal is not a part of that plan. It threatens the groundwater that the region depends upon, and the region's "clean and green" image. Investment in the region will be suppressed as long as there is a possibility that the mine could be built."*

[18] Marian Macdonald, Jimboomba Times, 16 July 2021, Shenhua Watermark Coal Mine land up for sale and locals are looking to buy, https://www.jimboombatimes.com.au/story/7343184/hopes-neighbours-can-reclaim-former-shenhua-mining-land/