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Airly Mine MOD 3

Submission to NSW Department of Planning

The Airly Mine Modification 3 would reduce employment at the mine, create economic uncertainty, and increase greenhouse gas emissions. The documentation contains numerous apparent contradictions and problematic claims, does not comply with economic assessment guidelines and ignores key precedents for considering the climate impacts of the coal that would be mined.

Tom Swann

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Summary

Airly is an underground thermal coal mine in NSW owned by Centennial Coal. *Airly Modification 3* proposes to increase the approved rate of production from 1.8 million tonnes per annum (mtpa) to 3 mpta of 'run of mine' (ROM) coal.

The proposal is focused on increased exports. The power stations that are the existing NSW customers for this coal are likely to be decommissioned within the approved mine life.

Contrary to Centennial's assertion, the proposal is not a "minor" modification. Increasing production while maintaining mine life increases total production. The proposal contains apparently contradictory information about mine life and total production. The economic assessment assumes a 15% increase in approved extraction from the mine, and the greenhouse gas analysis suggests an even greater expansion of 23%. It is possible even greater amounts could be mined under the modification, or under further extensions. Centennial's parent company, Banpu, states it has much larger reserves at the site.

If, as appears the case, the modification allows an increase in total production, this is not a "minor" modification as claimed but an expansion, undermining the proponent's rationale for the proposed assessment pathway. If the intention is not to allow an increase in total production, this should be made explicit in the conditions.

In The Australia Institute's experience of economic assessment of coal mines in NSW, rarely has assessment of projects been so problematic and poorly conducted as it has for the Airly mine. The company has hired the same consultant for economic assessment of MOD 3.

The claimed economic benefits are due to mining more coal, earlier.

The assessment fails to point out that total employment actually reduces under the modification, by 11%. This is simple arithmetic but obscured in the documentation.

The employment benefit calculation is unreliable, based on a very high claimed average wage at Airly, cited without any evidence or explanation. It is far higher than averages for relevant mining occupations or for regional NSW coal mining wages as shown in the Census data. If the assessment used wages in line with the rest of the industry, the net employment benefits would be smaller and possibly negative, given the reduction in job-years.

The modification proposal state benefits will include "operational flexibility". Flexibility creates uncertainty, especially if this flexibility is used frequently. While the documentation focuses on claimed benefits of this flexibility, it ignores the costs of uncertainty. The documentation itself fuels the uncertainty. The Social Impact Asssessment concludes:

> Additional staffing allows for flexibility to increase its staff establishment should the need arise but does not necessarily reflect the actual number of people employed at any one time. It is expected that the future staffing profile remain as it has historically…

There are currently only 89 FTE employeed at the mine.

Yet the assessment claims benefits assuming full production, and ignores the costs of uncertainty, which are present even if the mine does not operate at the increased rate.

The documentation makes no attempt to demonstrate project viability, yet claims the modification would make the proposal more viable. It is clear that the Airly mine is financially marginal. Banpu calls it a "high cost operation". Centennial Coal and its economic consultants AIGIS have a poor record on this. Mere months after Centennial asserted the Angus Place mine was viable, it closed the mine.

Environmental risks are increased by the increased speed of mining. The modification notes "subsidence will develop more quickly". Without a commensurate acceleration of the adaptive management 'feedback' loop, there is a greater risk of adverse impacts exceeding capacity to manage or avoid them by ceasing mining.

The proponent dismisses the project as a "small" part of Australia or NSW's emissions. It is unclear why it does not also dismiss employment increases as an even "smaller" part of Australia or NSW's employment. Additional employment at the mine ould be more than twenty times smaller than additional emissions, as a share of the national and state totals.

The modification will increase cumulative direct emissions. It will increase scope 3 or 'downstream' emissions, primarily coal combustion, from 4.2Mt to 7.0Mt CO2e per year. From this it is estimated to add more than 10 Mt CO2e cumulative scope 3 emissions.

The assessment of emissions is highly deficient and not in line with NSW Government Economic Assessment Guidelines. The carbon price used is 5 to 7 times smaller than recommended in the guidelines, there is no sensitivity analysis, no consideration of climate goals, and no consideration of combustion emissions.

The modification ignores legal requirements, and precedents, to consider scope 3 emissions and relevant policies, including the NSW Governent's climate policy and endorsement of the Paris Agreement. In the Rocky Hill coal mine case, the Chief Judge of the Land and Environment Court found the increase in coal combustion greenhouse gas emissions would be "unacceptable". In the Bylong coal mine decision, the Independent Planning Commission found failure to consider economic scenarios consistent with the Paris goals made the claimed economic benefits "uncertain". These matters are completely ignored, when they should be considered closely in any coal mining application.

Environmentally, and in line with climate goals, coal fired power and associated emissions must be reduced, not increased. In Australia, many analyses show consistency with climate goals means coal phase out must occur by 2030. Globally, the IEA shows the market for coal must go into immediate and sustained decline.

There are readily available low-cost alternatives to thermal coal. The NSW Energy Minister recently stated “Firmed renewables are now the most cost-competitive form of new generation and cost less than the current wholesale electricity price.” Failure to reduce thermal coal more rapidly than other sources or emissions imposes increased costs on other parts of the economy.

As the NSW Government notes, net-zero emissions is consistent with strong economic growth. It is not consistent with increased coal production.

In light of all of these considerations, the project is not in the state’s environmental or economic interests and should not be approved.

Introduction

The Australia Institute welcomes the opportunity to make a submission regarding the Airly Mine MOD 3 proposal.

Thermal coal from the Airly mine is both exported and sold to domestic power stations. In the modification proposal, Airly's owner Centennial Coal requests

- an increase in the run-of-of mine (ROM) coal production rate from the approved 1.8 million tonne per annum (Mtpa) to 3.0 Mtpa
- an amendment to the approved 20-year mine schedule for the increased production rate[1]

Currently Airly supplies the NSW coal power stations of Vales Point and Eraring. The modification says there are also

> opportunities for Airly Mine to supply coal to the local Mount Piper Power Station on an ongoing basis. This will be in addition to Airly Mine's existing supply to other domestic energy suppliers.[2]

The modification report also states there would be "No change in coal destinations" for rail freight.[3] This appears to be a contradiction, one of many in the proposal. Demand from Eraring and Vales Point is also uncertain. Vales Point is 41 years old, among the oldest coal power stations operating, and about as old as most coal fired capacity decommissioned since 2012.[4] Eraring will close in 2032, according to its owner Origin Energy.[5]

The expansion is clearly focused on export markets. This is clearest in the greenhouse gas emission analysis, which estimates a large increase in overseas coal combustion emissions.[6]

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[1] Centennial Coal (2019) *Modification Report, Airly Mine Extension Project, State Significant Development 5581, Modification 3, Volume 1: Main Report*, piii, https://web.archive.org/web/20191125104841/https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5581-MOD-3%2120191024T233436.540%20GMT

[2] Ibid. p 6, p 28 in file.

[3] Ibid. p 51, p 73 in file

[4] AEC data, cited in Senate Environment and Communications Committee (2017) *Retirement of Coal fired power stations, Interim Report,* https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Coal_fired_power_stations/Interim%20Report/c02

[5] Macdonald-Smith (2019) *Origin Defends 2032 Closure for Coal Plants* https://www.afr.com/companies/energy/origin-energy-defends-2032-closure-for-coal-plant-20191015-p530wz

[6] Centennial Coal (2019) *Modification Report, Airly... Modification 3 Volume 1,* Table 40, p 140, p 16 in file

Not a minor modification

Among the most fundamental issues for a coal mine proposal is how much coal will be mined and burned, not just in any year, but in total. However this is not clear from the documentation which contains apparently contradictory information.

The modification requests a two-thirds increase in annual production, while maintaining the mine life at 20 years. This increases notional remaining total production by two thirds. However, the modification would remain within the same mining area, within which it would change the production schedule (dates of mining of different zones). It is not clear from the documentation how much coal could be physically mined from the approved zones under the proposed increased rate of production.

The modified "Proposed Mine Schedule" proposes mining to continue to 2038, as in the current approval.[7] Yet the economic assessment assumes a shortened remaining mine life from 16 years (2036) to 11 years (2030). Ending mining in 2030 would not be required under the modification.[8]

On the basis of the assumptions in the economic assessment, the proponent seeks an increase not just annual but total approved production. Proposed annual rates of production (1.8mtpa over 16 years, vs 3mtpa over 11 years) entail an increase of 4.2 million tonnes of coal, or a 15% increase in the total production. This is confirmed in an Annexure to the economic assessment.[9]

The economic assessment also states total direct greenhouse gas emissions from the mine's operations (scope 1 and 2) would increase by 23%.[10] This suggests an even higher potential increase in coal output. Oddly, the economic assessment assumes a 17 year mine life as approved, not 16 years as elsewhere in the assessment.

If, as it appears, the modification allows an increase in total production, this is not a "minor" modification as claimed but an expansion, undermining the proponent's rationale for the proposed assessment pathway.

If the intention is not to allow an increase in total production, this should be made explicit in and conditions should be put in the proposal to this effect.

[7] Ibid. p 54, p 76 in file

[8] Ibid. p 146, p 168 in file

[9] AIGIS (2019) *Airly Mine Extension Project State Significant Development 5581 Modification 3 Economic Assessment,* p46, p 255 in file https://web.archive.org/web/20191125110321/https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5581-MOD-3%2120191024T233439.385%20GMT

[10] Ibid. p 17, p 226 in file

Even in this case, approving this modification can only increase the likelihood of increased coal production. It will be open to the proponent to request further modifications or extensions.

Banpu, parent company of proponent Centennial Coal, states the Airly mine has 33 Mt of "proven" reserves and 95.8 Mt of "probable reserves" or "resources".[11] This suggests an expectation to be able to mine around 48 million tonnes of coal from Airly, significantly more than what is currently approved.[12] Moreover, Banpu's estimates appear to refer to saleable coal, not the 'run of mine' (ROM) coal in terms of which Airly's production is limited, meaning Banpu expects to be able to mine even more ROM coal from Airly.

[11] Banpu (2019) *Coal reserves and production* https://www.banpu.com/coal_reserves_production/

[12] While not defined on the Banpu website, 'probable resource' is typically the amount thought to be extractable, at 50% likelihood, with current technology and prices.

Economic assessment

The Australia Institute made numerous submissions regarding earlier Airly coal mine proposals, outlining numerous deficiencies with the economic analysis. As previously noted:

> In The Australia Institute's experience of economic assessment of coal mines in NSW, rarely has the assessment of a project been so problematic and poorly conducted.[13]

Major deficiencies in the analysis for the Airly extension were confirmed by a third party review commissioned for the Planning and Assessment Commission from the Centre for International Economics (CIE).

The same consultant, AIGIS, has been commissioned to conduct the economic assessment for this proposal. Significant issues are present in the current economic assessment.

MINING MORE COAL, EARLIER

The increase in benefits claimed in the assessment is due two "two factors":

> Firstly… the modification will result in earlier resource recovery and realisation of the associated economic benefits. The shorter period of discounting acts to increase NPV. Secondly, due to the production schedule proposed under the BAU case, less of the remaining resource will be extracted, with the resultant reduction in economic benefit.[14]

The claimed benefit is the result of 'discounting' later benefits more than earlier ones, and the result of mining more than under BAU. For confirmation of the latter, refer to Annexure 3, Figure A3.1, in the AIGIS assessment.

REDUCTION IN EMPLOYMENT

The claimed benefits include a small employment benefit. This is the result of bringing forward employment that would otherwise be spread over a longer time frame. Hence

> despite the magnitude of the [annual] FTE workforce increase (≈30%), the overall economic effects are modest. The increase in present value related to earlier realisation of employment-related economic benefit resulting from the briefer period

[13] Campbell (2015) *Airly PAC submission 1 Airly Coal Mine project - Submission to Planning Assessment Commission* https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2015/08/airly-mine-extension/presentations/rodcampbellpdf.pdf

[14] AIGIS (2019) *Airly Mine Modification 3 Economic Assessment,* p 12 in report, p221 in file,

> of production is offset to some extent in practical terms by the longer-term employment required for the BAU case.[15]

While the assessment acknowledges the *shorter* employment, it neglects to point out that less employment occurs at the mine under the modification compared with than business as usual. The arithmetic is shown in Table 1.

Table 1: Reduction in employment from approval

	'BAU'	MOD 3	Difference	
Years	16	11	-5	(-31%)
Employment (FTE)	155	200	45	(29%)
'Job years'	2480	2200	-280	(-11%)

Source: AIGIS Economic Assessment for Airly MOD 3 proposal.

On the assumptions of the economic assessment, the modification would result in a 11% reduction in direct employment (fewer FTE job-years) at the mine.

EMPLOYMENT BENEFIT

Employment benefits are estimated as a "labour surplus", taken to be the difference between the average Airly wage and median wage for relevant occuptions for underground coal mining (modified by a small probability of the miner otherwise being on Newstart).

The "assumed average wage" for relevant mining occupations is far lower at $138,112.[16] The calculation uses an average wage for Airly as $189,885. No evidence is given for the Airly wage figures, which are apparently provided by Centennial.

The claimed average wage for Airly is a third higher than the median wages in specialist occupations directly relevant to underground coal mining. It would be surprising if this were really the case.

It is also surprising the reported average Airly wage is an extreme outlier by comparison with ABS Census data. Looking specifically at workers in the coal mining industry in regional NSW, the 2016 Census shows only 16% of these workers reported an income of $156,000 per annum or higher. The median was around $110,000.[17]

[15] Ibid. p 43, p 252 in file.

[16] Note this is excludes lower wage occupations that would be employed on the mine, excluded as they are not specific to undermine coal mining.

[17] ABS (2016) *Census,* accessed via table builder

It is especially surprising that this difference is the basis for the claimed employment benefits and yet is not discussed in the analysis. Without evidence, the claimed average wages at Airly, and the calculation based on it, should be treated as unreliable.

This very same problem was noted in the third party review, by CIE, of the AIGIS assessment for an earler Airly extension:

> It is not possible to verify Aigis' estimate of employee benefits due to a lack of information on key assumptions including the stated average wage at Airly Mine.[18]

If the assessment used wages in line with the rest of the industry, the net employment benefits would be smaller and possibly negative, given the reduction in job-years under the proposal.

VIABILITY

The claimed benefits are largely the result of bringing forward royalty payments. Unlike in previous assessments, assumptions about the price of coal are disclosed (Annexure 2). Like previous assessments, no attempt is made to demonstrate the viability of the proposal.

As The Australia Institute argued in previous submissions, more important for royalty payments than the price of coal is whether the mine is financially viable and able to operate consistently. If it is not, these payments will not be realised. The proponents and consultants AIGIS do not acknowledge this simple fact.

Furthermore, at a mine operating close to margins the operators will have an incentive to cut corners on safety and environmental standards and be less likely to afford proper rehabilitation and mine closure expenses.

Centennial Coal and its economic consultants AIGIS have a poor record in predicting the viability of their mines. In the assessment of the nearby Angus Place mine AIGIS wrote:

> Centennial Coal submits that this would amply establish the viability of continued operation of the mine. Centennial Coal's extensive community consultation programs have not produced any material questioning the operational viability of Angus Place or other Centennial Coal mines operating in the area.
>
> (Angus Place Response to Submissions, Response to TAI Submission, p5)

[18] As cited in Campbell (2015) *Airly Coal Mine project - Submission to Planning Assessment Commission,* p 3, https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2015/08/airly-mine-extension/presentations/rodcampbellpdf.pdf

Just months later, Angus Place was closed as it was not economic to run. It remains in care and maintenance.

It is clear that the Airly mine is financially marginal. Banpu calls it a "high cost operation".[19] The project was mothballed, or put in "care and maintenance", between 2002 and 2009 and again from 2012 to 2014. These periods include some of the highest coal prices in history, yet the Airly mine was able to operate only intermittently.

Despite previously claiming the mine was viable under previous extensions, Centennial now proposes the modification on the basis it will "operational flexibility to Airly Mine and will also improve the mine's economic viability."[20] Similarly, the application states

> the Project at the increased production rate has a greater net present value than the Project as approved, and therefore the Project as modified is more economically viable.[21]

This is not correct. The NPV estimated in the cost benefit analysis *assumes* the mine's viabity and does not demonstrate it.

INCREASED UNCERTAINTY

The modification proposal state benefits will include "operational flexibility".[22]

Leaving a mine in indefinite care and maintenance, with ongoing but unfulfilled promises of jobs. is not in the interests of the community. Similarly, approving the expansion of Airly to provide "flexibility" is likely to create uncertainty, especially if this flexibility is in fact used frequently.

While the documentation focuses on claimed benefits of this flexibility, it ignores the costs. It claims benefits assuming full production, but ignores the costs of the uncertainty, which are present even if the mine does not operate at the increased rate.

The documentation itself fuels the uncertainty. The Social Impact Asssessment concludes:

> Additional staffing allows for flexibility to increase its staff establishment should the need arise but does not necessarily reflect the actual number of people employed at

[19] Banpu (2012) *Annual Report 2012,* p 11, https://www.banpu.com/backoffice/upload/AR2012-EN-Final_170602.pdf

[20] Centennial Coal (2019) *Modification Report, Airly... Modification 3 Volume 1,* p vii in report, p 11 in file.

[21] Ibid, 3, p 26 in file

[22] Ibid, p 165, p 187 in file

> any one time. It is expected that the future staffing profile remain as it has historically…[23]

There are currently only 89 FTE employeed at the mine. (This is helpfully listed in assumptions for the greenhouse gas analysis.)[24]

The economic assessment says it is difficult to assess whether companies or the community would prefer the shorter or longer term option for the mine:

> The complexities surrounding the variance in the mid- to long-term aims of relevant businesses, and other confounding factors, render an accurate assessment of how such businesses would perceive these two options, and what their preferences are, difficult to assess.[25]

For this reason the assessment relies entirely on discounting of claimed benefits, assessed at full production and employment.

This however ignores the social and economic cost of the uncertainty implied by the proponent's intention to operate "flexibily".

[23] Centennial Coal (2019) *Airly Mine Modification 3, Social Impact Assessment,* p 53, p 316 in file, https://web.archive.org/web/20191125110321/https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5581-MOD-3%2120191024T233439.385%20GMT
[24] SLR (2019) *Airly Mine Air Quality Impact Assessment and Greenhouse Gas Assessment,* p 57, p 185 in file, https://web.archive.org/web/20191125110321/https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5581-MOD-3%2120191024T233439.385%20GMT
[25] AIGIS (2019) *Airly Mine Modification 3 Economic Assessment,* p 27, p 236 in file

Environmental impacts

The modification proposal states “Environmental impacts, with the exception of greenhouse gas emissions, are lesser or remains unchanged from the impacts assessed and approved in the consent SSD 5581.”[26]

This statement implies total approved coal mining would remain the same. The statement is doubtful if the modification in fact allows increased total production.

There are environmental risks from *faster* mining. The mine was approved with an adaptive management approach to various environmental impacts, such as subsidence, whereby impacts are monitored and mining is managed and potentially halted as a result of any observed adverse impacts.

Accelerating the rate of mining increases the speed of any adverse environmental impacts. For example the modification notes “subsidence will develop more quickly”. However it then says “the magnitudes will not change due to increased production rate and hence there will be no change to environmental consequences already approved in SSD 5581”.[27]

This latter claim is doubtful. Without a commensurate increase in the speed in the adaptive management ‘feedback’ loop, there is a greater likelihood of greater negative impacts and impacts exceeding approvals.

INCREASED GREENHOUSE GASES

The modification states the main environmental impact would be the increased annual greenhouse gas emissions. It focuses on annual scope 1 and 2 emissions (direct emissions and purchased electricity emissions). It dismisses these impacts as “small proportion of both the Australian and NSW total emissions”.[28]

It is unclear why the proponent dismisses the project as a “small” part of Australia or NSW’s emissions while failing to dismiss employment increases as an even “smaller” part of Australia or NSW’s employment. The additional employment would be more than twenty times smaller than its additional emissions, as a share of the national and state totals. Given the proponent does not wish to dismiss additional employment, they should not dismiss the additional emissions, especially given emission reduction goals.

[26] Centennial Coal (2019) *Modification Report, Airly... Modification 3 Volume 1,* p 169, p 191 in file

[27] Ibid. p 71, p 93 in file

[28] Ibid. p 141, p 163 in file

Greenhouse gas emissions are a *stock* pollutant. In terms of environmental costs, the *total* amount over time is generally more important more than the *flow* in any particular year.

As noted, the modification documents state the total approved direct (scope 1 and 2) emissions would be greater under the modification, by 23%.[29] This stands in stark contrast with Australia's commitment to reduce emissions by 26% by 2030 on 2005 levels, and the further commitment to increase the target over time.

The modification's main impact on the climate will be the increase in scope 3 or 'downstream' emissions, primarily from burning the product coal. The documentation shows a large increase in annual approved scope 3 or 'downstream' emissions, from 4.2Mt to 7.0Mt CO2e per year.[30]

This is ignored in the the project 'justification', which focuses entirely on scope 1 and 2 emissions.

Using the scope 3 emission numbers above and the assessment's assumptions of mine life, we can see 16 remaining years under the modification would result in 67 Mt CO2e of total scope 3 emissions, while 11 years as modified would produce 77 Mt CO2e in total.

In other words, the modification would result in more than 10 Mt CO2e additional coal combustion emissions.

Moreover, bringing emissions forward can only increase the likelihood of increased total emissions over time, beyond those proposed in the modification.

Downstream emissions from Airly are both within and outside NSW territorial boundaries. The emissions analysis shows a large increase in annual coal export combustion emissions from the mine, as well as a reduction from approved annual Australian coal combustion emissions, for reasons that are not explained, although an increase in emissions from actual 2017/18 Australian combustion emissions from the mine.[31]

Under current legislation and precedent, both coal combustion emissions must be considered whether they occur within or outside of NSW territorial boundaries.

GREENHOUSE GAS COSTS

The economic assessment estimates the economic cost of greenhouse gas emissions at a cost of $11.90 per tonne CO2e.

[29] AIGIS (2019) *Airly Mine Modification 3 Economic Assessment*, p 17, p 226 in file

[30] Ibid. p 141, p 163 in file

[31] SLR (2019) *Airly Mine Air Quality Impact Assessment and Greenhouse Gas Assessment,* p 57, p 185 in file,

This figure and approach is taken from the Department of Primary Industries guidelines from for economic assessment.[32]

The guidelines endorse the use of 'market prices' for carbon permits.

Such an approach does not assess the environmental cost of emissions. Rather it assesses the economic cost of emissions given the market price. This would be the cost to the project if it were to pay the relevant prices, but as the modificaiton project is not proposing to offset its emissions, it is assessing the cost imposed on other sectors by having to reduce emissions by more as the result of increased emissions from the project.

The guidelines cite the $11.90 figure as the then average price of emissions purchased under the Commonwealth Government's Emission Reduction Fund. Prices in more recent ERF auctions have been higher at $14.17 per tonne and are likely to increase in future rounds.[33]

Using ERF prices is not consistent with the logic or the letter of the guidelines. The ERF prices used in the assessment are not consistent with the Commonwealth or NSW climate targets, much less the Paris Agreement climate goals.

The guidelines when they state proponents should use not current prices but "price expectations".[34] Proposed future emissions impose marginal, not average, abatement costs at future, not current prices. As well as 'market' expectations, the assessment should consider expectations of prices consistent with climate goals, including those of the Paris Agreement. The assessment does not do any of this.

Moreover, while the guidelines mention the ERF, they do not recommend using ERF prices in the assessment. Rather they recommend using prices from the European Union Emissions Trading Scheme (EUETS).[35] The guidelines state other prices may be used if good reasons can be given, which the Airly MOD 3 economic assessment does not.

The current price in the EUETS is around €25 per tonne of CO2e, or around A$40 at current exchange rates.[36] Bloomberg New Energy Finance has estimated EU ETS prices to range between €28-€35 from 2020-2030.[37] In April 2018 the Carbon Tracker Initiative, experienced

[32] DPE (2018) *Technical Notes Supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals,* https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/technical-notes-supporting-the-guidelines-for-the-economic-assessment-of-mining-and-coal-seam-gas-proposals-2018-04-27.ashx?la=en

[33] CER (2019) *Auction July 2019* http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/july-2019

[34] DPE (2018) *Technical Notes Supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals,* p48

[35] Ibid.

[36] Markets Insider (2019) *CO2 European Emission Allowances,* accessed 22 November 2019, https://markets.businessinsider.com/commodities/co2-european-emission-allowances?op=1

[37] Olsen (2019) *The EU ETS Back In the Spotlight,* https://poweringpastcoal.org/insights/policy-and-regulation/the-eu-ets-back-in-the-spotlight

UK financial analysts, estimated EU ETS prices to rise to "€25-€30 per tonne by 2020-21"—commensurate with current prices—and then to "€55 a tonne by 2030 if the European Commission ultimately legislates to align the bloc's current emissions targets with the Paris climate agreement".[38]

€35-€55 per tonne at current exchange rates is approximately A$57-A$89.

Clearly the cost of emissions should be assessed as far higher, even on the NSW government's own economic assessment guidelines.

Moreover, the guidelines state

> project proponents should … Undertake a sensitivity analysis on anticipated project GHG emissions output (Scope 1 and 2) at carbon prices below and above the central estimate price.[39]

The economic assessment does not appear to do this.

The economic assessment also makes no attempt to demonstrate the *viability* of the mine with any carbon price, whether applied directly to the mine or the domestic and export markets into which the mine proposes to sell additional coal.

While the guidelines state "only Scope 1 and Scope 2 emissions need to be reported", the guidelines encourage reporting of scope 3 emissions, saying this is "helpful in reducing residual uncertainty around total project emission impacts".[40]

The 'market price' of carbon should be applied to scope 3 emissions. The environmental costs would likely outweigh the claimed benefits.

REQUIREMENTS TO CONSIDER SCOPE 3 EMISSIONS

The Mining State Environmental Planning Policy (SEPP) includes a requirement to consider downstream emissions and relevant policies:

> in determining a development application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream

[38] Carbon Tracker (2018) *EU Carbon Prices Could Double by 2021 and Quadruple by 2030* https://www.carbontracker.org/eu-carbon-prices-could-double-by-2021-and-quadruple-by-2030/

[39] DPE (2018) *Technical Notes Supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/technical-notes-supporting-the-guidelines-for-the-economic-assessment-of-mining-and-coal-seam-gas-proposals-2018-04-27.ashx?la=en

[40] Ibid, p55

> emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions[41]

The Airly MOD 3 does not mention this requirement and substantially ignores it. As a result, the modification also contradicts recent precedents from the Land and Environment Court (LEC) and the Independent Planning Commission (IPC), namely:

- the LEC refusal of the Rocky Hill mine,[42]
- the IPC imposition of conditions on coal exports from the United Wambo mine approval,[43] and
- the IPC refusal of the Bylong mine.[44]

In none of these cases were scope 3 emissions the main consideration, but they each and together set important precedents for consideration of scope 3 emissions under NSW planning law, which the Airly MOD 3 documentation ignores.

Rocky Hill – additional emissions unacceptable

In the Rocky Hill judgment, Preston CJ of the NSW LEC stated the simple fact that "There is a causal link between the Project's cumulative GHG emissions and climate change and its consequences".[45] His consideration specifically included coal combustion emissions.

Preston CJ found these impacts were "unacceptable" because the Australian and NSW Governments have committed to reduce emissions in light of the Paris Agreement's goals. This included the NSW Government target of net-zero emissions by 2050.

Preston CJ rejected the proponent's arguments to the contrary, in particular rejecting the "market substitution argument":

> The environmental impact remains unacceptable regardless of where it is caused. The potential for a hypothetical but uncertain alternative development to cause the same unacceptable environmental impact is not a reason to approve a definite development that will certainly cause the unacceptable environmental impacts.[46]

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[41] s 14(2)

[42] *Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7* https://www.caselaw.nsw.gov.au/decision/5c59012ce4b02a5a800be47f

[43] NSW IPC (2019) *United Wambo Open Cut Coal Mine Project (SSD 7142) and associated modifications (DA 305-7-2003 MOD 16 and DA 177-8-2004 MOD 3)* https://www.ipcn.nsw.gov.au/projects/2018/11/united-wambo-open-cut-coal-mine-project-ssd-7142

[44] NSW IPC (2019) *Bylong Coal Project – Statement of Reasons for Decision* https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2018/10/bylong-coal-project/determination/bylong-coal-project-ssd-6367--statement-of-reasons-for-decision.pdft

[45] *Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7* (par 525)

[46] Ibid. (par 545)

While debate about scope 3 emissions has recently focused on exported fossil fuel, the same considerations apply to domestic combustion emissions.

Preston CJ concluded:

> The GHG emissions of the Project and their likely contribution to adverse impacts on the climate system, environment and people adds a further reason for refusal. Refusal of the Project will not only prevent the unacceptable planning, visual and social impacts, it will also prevent a new source of GHG emissions.[47]

The modification proposes to substantially increase annual production of coal, hence annual emissions, and on its own economic assessment to increase total coal production and emissions. Yet the proponent has ignored the important precedent from the Chief Justice of the NSW Land and Environment Court finding in another case such an impact was unacceptable and reason for refusal.

Bylong precedent – transition scenario analysis

The IPC's decision to refuse the Bylong coal mine drew on the precedent in the Rocky Hill case. Specifically, the IPC found the NSW Government's commitment to the Paris Agreement and net-zero emissions targets required consideration of a Paris-aligned energy scenario. An example is the International Energy Agency's Sustainable Development Scenario (IEA's SDS), where the world meets global climate, economic and energy access goals.[48] In this scenario, coal use goes into immediate and sustained decline.

The IPC found that failure to assess the proposal against a credible energy scenario consistent with the Paris Agreement left the claimed economic benefits as uncertain:

> the Commission finds that there is a reasonable level of uncertainty in the estimation of the economic benefits of the Project and Recommended Revised Project, and that this is exacerbated by the intergenerational inequity of costs and benefits. The Commission also notes that scenarios under the SDS have not been considered by the Applicant. The Commission therefore finds that the economic benefits of the Project and the Recommended Revised Project are uncertain.[49]

The Airly MOD 3 proposal does not do this. By the reasoning in the IPC decision, the claimed economic benefits must be considered uncertain.

[47] Ibid. par 556

[48] NSW IPC (2019) *Bylong Coal Project – Statement of Reasons for Decision,* par 777-780,

[49] NSW IPC (2019) *Bylong Coal Project – Statement of Reasons for Decision,* par 784

The Airly MOD 3 proposal provides no analysis or even commentary on either environmental consistency with or commercial viability under on any range of scenarios, much less on a scenario consistent with Paris or increased ambition.

MUST CONSIDER ENERGY TRANSITION

Australia's greenhouse emissions have increased since the repeal of the carbon price. Australian government projections see emissions continuing to increase to 2030, leaving Australia far from its current emissions target. Australia's current target is inadequate on any way of assessing it.[50]

As Centennial's greenhouse gas consultants note, under the Paris Agreement "All countries to set mitigation targets from 2020 and review targets every five years to build ambition over time."[51] This is endorsed in the NSW climate policy and its target of net-zero by 2050.

Despite the NSW Government commitment to reduce emissions and to the Paris Agreement, the modification report does not consider how increasing coal emissions relates to the goals of Paris or the NSW climate policy. This should be done from an environmental and economic perspective.

Environmental

Solving climate change requires using less coal, not more.

The IEA's SDS shows meeting global climate, economic and energy access goals requires an immediate and sustained decline in global coal production and consumption. Increased production at Airly is unlikely to be viable under the SDS, given that according to the owner, "Airly is a high cost operation".[52]

In Australia, modelling by Jacobs for the Climate Change Authority in 2017 showed that an electricity emissions pathway consistent with the Paris Agreement requires a phase out of

[50] Merzian and Campbell (2018) *Advance Australia's fair share: assessing the fairness of emissions targets* https://www.tai.org.au/content/advance-australias-fair-share

[51] SLR (2019) *Airly Mine Air Quality Impact Assessment and Greenhouse Gas Assessment,* p 52, p 181 in file

[52] Banpu (2012) *Annual Report 2012,* p 11, https://www.banpu.com/backoffice/upload/AR2012-EN-Final_170602.pdf

coal fired power stations in Australia by around 2030.[53] A 2019 analysis by Climate Analytics came to the same result.[54]

Economic

There are readily available low-cost alternatives to thermal coal. The NSW Energy Minister recently stated "Firmed renewables are now the most cost-competitive form of new generation and cost less than the current wholesale electricity price."[55] The cost of firmed renewables will continue to fall, reducing further the cost of increased ambition.

As thermal coal is readily substitutable at low cost, achieving cost-effective emission reductions cost requires thermal coal to be reduced more rapidly than emissions from other sources. Failure to reduce thermal coal more rapidly than other sources or emissions imposes increased costs on other parts of the economy.

As the NSW climate policy notes, "net-zero emissions is consistent with strong economic growth".[56] This is consistent with a vast array of existing economic literature.[57]

[53] Jacobs (2017) *Report to the independent review into the Future Security of the National Energy Market: Emission mitigation policies and security of electricity supply,* http://www.environment.gov.au/energy/publications/electricity-market-final-report

[54] Parra et al (2019) *For climate's sake: coal-free by 2030. Rationale and timing of coal phase-out in Australia under the Paris Agreement* https://climateanalytics.org/publications/2019/for-climates-sake-coal-free-by-2030/

[55] In Parkinson (2019) *NSW announces 3,000MW renewable energy zone, and energy security target* https://reneweconomy.com.au/nsw-announces-3000mw-renewable-energy-zone-and-energy-security-target-22341/

[56] NSW Department of Environment (n.d.) *Fact Sheetachieving Net-Zero Emissions By 2050,* p 2, https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/achieving-net-zero-emissions-by-2050-fact-sheet-160604.pdf

[57] Swann (2019) *A model line up* https://www.tai.org.au/content/a-model-line-up

Conclusion

The Airly MOD 3 proposal documentation contains numerous apparent contradictions and problematic assumptions. Nonetheless on the basis of figures in the documentation we can see it intends to increase coal mining, leading to a large increase in coal combustion emissions, while reducinge total employment, as a best case scenario, and creating economic uncertainty by operating 'flexibly'. The proponent even states that employment will not increase above historic levels.

The proposal will result in a significant increase in total greenhouse gas emissions, both direct and from coal combustion. Treatment of emission costs is highly problematic and not in line with the assessment guidelines. The assessment ignores legal precedent and policy requirements to consider coal combustion emissions. There is no consideration of the realities and requirements of decarbonisation, in line with NSW policy goals.

The proposal is not in the state's economic or environmental or economic interest and should not be approved.