

United Wambo Mine

Submission to Independent Planning Commission

Submission

Rod Campbell
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Level 5, 131 City Walk

Canberra, ACT 2601

Tel: (02) 61300530

Email: mail@tai.org.au

Website: www.tai.org.au

Summary

The economic assessment of the United Wambo coal mine project (the Project) has not been adequate. Issues that have been raised repeatedly through the assessment process have not been addressed.

In particular, the justification for approving a new large thermal coal project has not taken into consideration international and Australian commitments to climate action and the likely resulting impacts on coal markets. The Project's economic assessment relies on forecasts that predate key events in coal markets such as the cancellation of Newcastle's T4 fourth coal terminal. A key document relied on by the Project's economic assessment has a history of optimistic coal export forecasts. Despite this, the proponents have not updated the economic assessment.

With NSW coal production below its 2014 peak and export facility expansions cancelled, it is likely that not all approved coal production in NSW will be extracted. NSW mines are now to a considerable degree competing against each other. Adding to this competition with new capacity such as this Project is in the interests of the new mine proponents and against the interests of workers and investors in existing mines. Decision makers should seek more information on the capacity of operating and approved mines and the potential for new mines to simply displace production in other mines before approving new projects. No such information is provided in the Project's assessment documents.

The justification of the project is weakened by the proponent's concession that the viability of the Project is dependent on the extent to which the site must be remediated. If either of the two proposed voids needs to be filled the proponents consider the project unviable.

This conclusion is not supported by the economic assessment, which estimated net producer surplus at \$268 million present value (7% discount rate). The same consultants estimate the present value (7%) cost of filling both voids at \$129 million, suggesting that voids could be filled and \$139 million present value net benefit would still be enjoyed by the proponents. Instead of conceding this point, the proponents prefer to selectively apply a lower discount rate to this cost and ignore potential benefits of filling the voids.

There are only two possibilities that arise from the voids discussion. Either, the proponents are presenting information strategically to avoid having to fill in voids, despite sufficient surplus being available, or the economic assessment documents

overstate the economic case for the project. Either way it casts doubt on the Project being able to deliver on claimed benefits and its ability to rehabilitate the site in line with community expectations.

Australia Institute polling on mine site rehabilitation has found that less than 1 percent of people felt that it was acceptable for “pits [to] remain and fill with saline or acidic groundwater, dirt and rock piles remain in a fenced off area.”

Issues raised in earlier submissions have not been addressed including inaccurate company tax payment estimates and assumptions around biodiversity offsets.

Introduction

The Australia Institute welcomes the opportunity to make a submission to the Independent Planning Commission (IPC) on the United Wambo Open Cut Coal Mine Project (Project). We have previously made submissions to the former Planning Assessment Commission on this Project, as well as submissions on the *United Wambo Open Cut Coal Mine Project economic assessment* by Deloitte Access Economics (Deloitte assessment) and on *Wambo Mine - Modification 12*.¹

There are a number of issues raised in our submissions that are not adequately addressed in the Final Assessment Report (FAR) by the Department of Planning and Environment, or in previous documents such as the Response to Submissions (RtS) or in the 2016 or 2017 reviews conducted by the Centre for International Economics (CIE).

This submission was made at the request of the EDO NSW. EDO NSW have provided me with a copy of the Uniform Civil Procedure Rules 2005 (UCPR), and the Expert Witness Code of Conduct contained in Schedule 7 of the UCPR. I have read and agree to be bound by these rules and code of conduct.

¹ Campbell (2018) United Wambo Mine: Submission to the Planning Assessment Commission, <http://www.tai.org.au/content/united-wambo-mine-submission-planning-assessment-commission>
Campbell (2016) Wambo Mine Modification 12 Submission, <http://www.tai.org.au/sites/default/files/P255%20Wambo%20submission%20FINAL.pdf>; Campbell (2016) United Wambo coal project Submission, <https://majorprojects.accelo.com/public/cbf1e444edd670ba2d2bb348f687df7d/The%20Australia%20Institute.pdf>

UNITED Wambo in context of coal Market

Our 2016 submission noted:

[Deloitte's Local Effects Analysis (LEA)] does not consider the reality that coal demand growth has halted. NSW coal exports actually declined last year, for the first time in 15 years. Existing coal mines are closing, while others are being approved.

The wider context of climate policy is important to understand. Under the Paris climate agreement, which Australia is a party to, Australian thermal coal exports are expected to decline rapidly, even according to coal industry consultants such as Wood Mackenzie.

The LEA does not consider that under Australian government policy, the future of this project will be fighting with other Hunter Valley mines for slices of a shrinking pie.

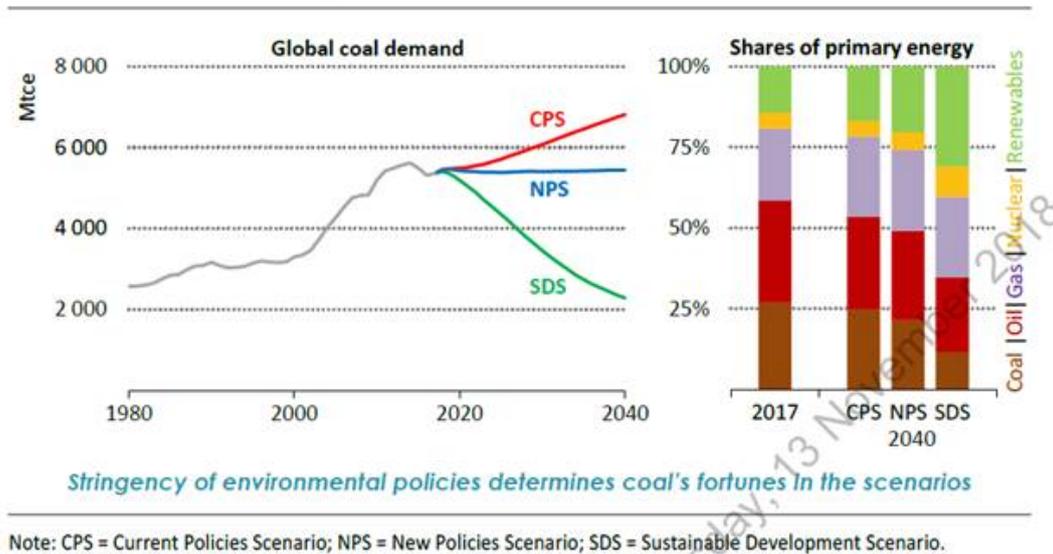
Appended to that submission is extensive analysis showing that approved production from current coal operations in NSW and Queensland is sufficient for current levels of domestic and export production out to 2025.²

The FAR is silent on the fact that Hunter coal mines are now fighting for a share of a smaller market and a market that is expected to decline dramatically if climate policies are implemented in line with the Paris Agreement. Figure 1 below shows the International Energy Agency (IEA)'s estimates for global coal demand under its three modelled scenarios. The green line labelled "SDS" represents the sustainable development scenario' in line with the Paris Agreement:

² See Denniss et al (2015) *Never gonna dig you up! Modelling the economic impacts of a moratorium on new coal mines*,
<http://www.tai.org.au/sites/default/files/P198%20Never%20gonna%20dig%20you%20up%20FINAL.1.pdf>

Figure 1: IEA coal demand estimates

Figure 5.3 ▶ Global coal demand and share of coal in global primary energy demand by scenario



Source: IEA (2018) *World Energy Outlook 2018*, www.iea.org

Figure 2 shows that under the SDS scenario coal demand declines significantly in the years ahead, reducing by two thirds by 2040. This would have a major effect on the Hunter Valley industry as the IEA expects the volume of traded coal to decline from over 1,100 million tonnes per annum (Mtpa) in 2017 to 815Mtpa in 2025 and 518Mtpa in 2040.³

No consideration has been made by NSW planning authorities of what the impacts of such a decline will be on the NSW coal industry. In relation to this Project, the IPC raised the future of the coal market with both the proponent and the Department, asking “*whether any of the project assumptions need to be updated in light of the time that has elapsed between when they were originally formed and this consent process.*” The proponent answered:

Mr Wills: Look, it’s a good question, Tony. I guess the position we’ve taken is that it was assessed on the numbers of the day. You know, the market is just constantly changing. At what point do you continue to update?... We did some sensitivity in the economic impact assessment around revenue assumptions and

³ IEA (2018) *World Energy Outlook 2018*, table 5.1, www.iea.org.

other cost elements that talked about the ups and downs associated with the market, but, no, we haven't recommended to update the values. ⁴

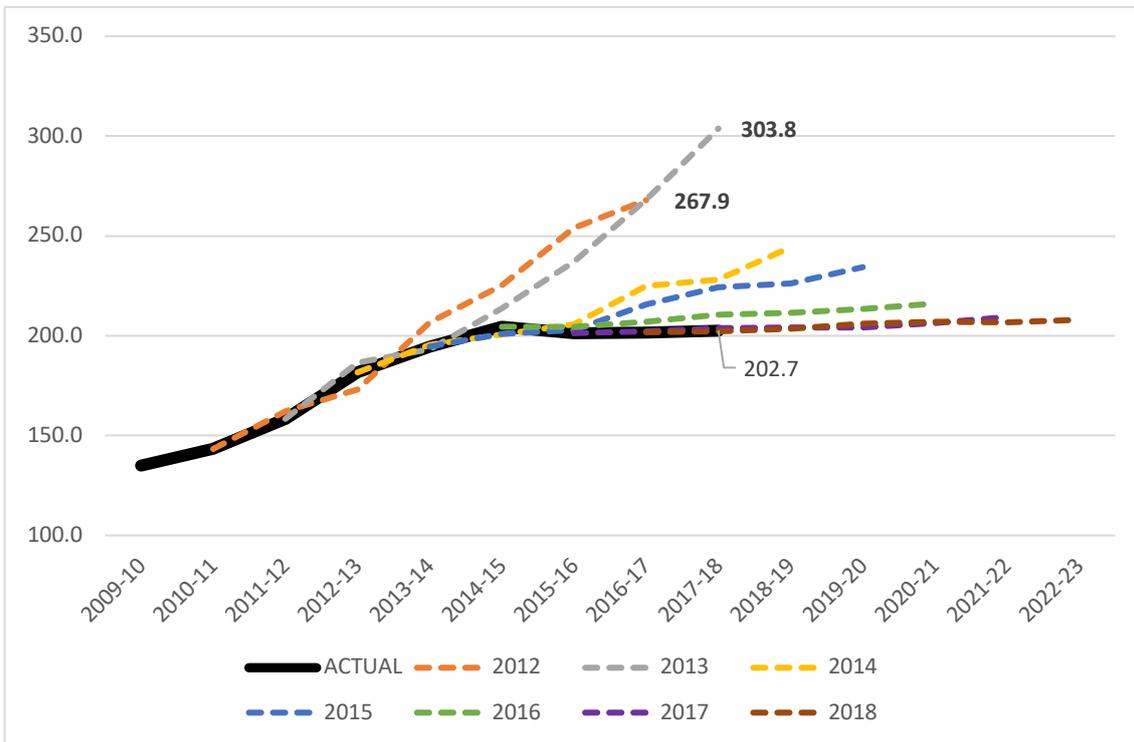
While the proponents have not updated their economic modelling assumptions, there have been major changes in the outlook for NSW coal exports since Deloitte's assessment was written in 2016 and even since The Australia Institute's last submission on this Project at the start of 2018. A key event is the abandonment of the Terminal 4 (T4) coal port expansion in late May 2018.⁵ The growth in NSW coal exports that had been predicted by proponents had not eventuated. The proponents of T4 include Glencore, one of the proponents of this Project.

The United Wambo proponents' economic assessment by Deloitte was based on forecasts by the federal Department of Industry in 2016, specifically its *Resource and Energy Quarterly publication*. This publication has developed a consistent tendency to overestimate thermal coal export volumes, as shown in Figure 2 below:

⁴ IPC (2018) Meeting with applicant re: United Wambo Open Cut Coal Mine Project, https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/general/transcripts/wambo/united-wambo-20181206_applicant.pdf?la=en&hash=BF522BEC9E28EACFACEF6541E073112F page 54-55.

⁵ Wakatama et al (2018) *T4 scrapped: Controversial multi-billion-dollar coal loader in Newcastle won't go ahead*, <https://www.abc.net.au/news/2018-05-31/plans-for-five-billion-dollar-coal-loader-scrapped/9821890>

Figure 2: Resource and Energy Quarterly thermal coal export volume forecasts



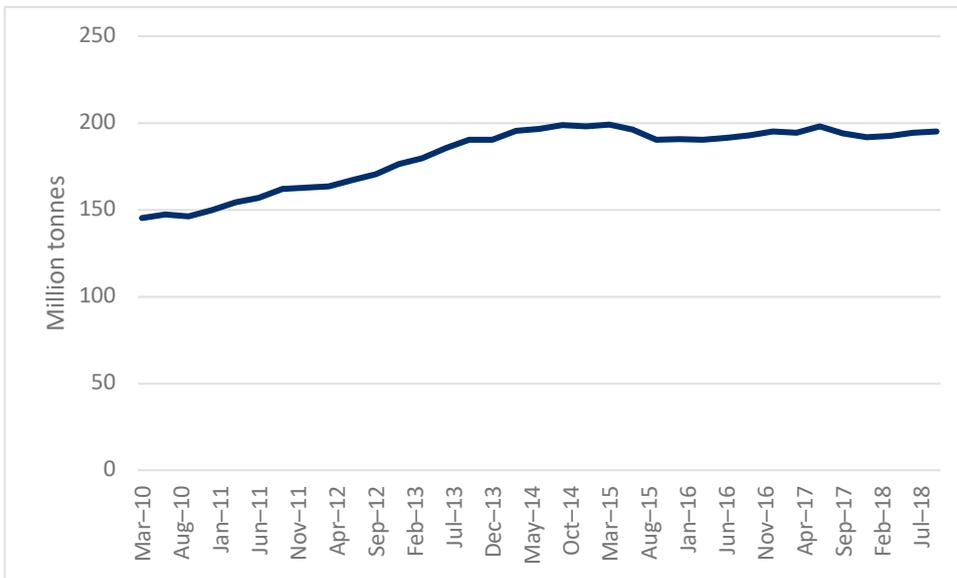
Source: Department of Industry (various years) *Resource and Energy Quarterly*.

Figure 2 shows that Australian official forecasts of thermal coal exports, including the one used by the proponent’s economists, have routinely overestimated demand for Australian coal since 2012. Australia exported 202.7Mt of thermal coal in 2017-18, 100Mt less than the Department had earlier forecast. The green dotted line is the forecast used by Deloitte, still forecasting steady growth in thermal coal exports.

Having failed to anticipate the end of Australia’s thermal coal export boom, the Department of Industry appears reluctant to acknowledge the world’s commitment and requirement to reduce coal use and the coal trade urgently. The Department of Industry makes no forecast or scenario analysis that includes or considers action on climate change in line with Australian Government commitments, such commitments being supported by the NSW Government.

Department of Industry figures show that NSW coal production has plateaued and declined slightly since its peak in the year to September 2014, as shown in Figure 3 below:

Figure 3: NSW saleable coal production (year to date)



Source: Department of Industry (2018) Resource and Energy Quarterly

While the declines are small, they need to be seen in context – such a decline appeared impossible just a few years ago. In late 2014 the Centre for International Economics (CIE), the reviewers of the United Wambo economic assessment, wrote:

Higher demand in Asia is expected to boost Australian thermal coal exports to 2018, with Australia expected to account for roughly 30 per cent of the increase in incremental global thermal coal exports.⁶

This prediction was totally wrong. Demand in Asia declined almost as soon as these words were written. CIE’s observation that there will be ‘sustained demand for the product [coal]’ is misleading. While the world will use a larger amount of coal than United Wambo will produce, it is clear this market is declining and will decline even faster under the Paris Agreement. The United Wambo Project is competing against other Hunter coal mines. Its expansion will to some extent come at the expense of existing Hunter mines.

This point should have been noted by Deloitte and CIE in the RtS and 2017 review. It should be addressed in detail in the LEA. It is long past time to begin planning for what the Hunter coal industry will look like in a world that acts on climate change. Simply approving new mines noting ‘sustained demand’ for some level of thermal coal and

⁶ CIE (2014) *The contribution of mining to the NSW economy*, https://www.resourcesandenergy.nsw.gov.au/data/assets/pdf_file/0007/539935/CIE-Report-Contribution-of-mining-to-NSW.pdf

ignoring the social and environmental impacts of inter-mine competition in the Hunter is irresponsible and inefficient.

COSTS OF FILLING IN MINE VOIDS

Various estimates have been made of the cost of filling in the voids proposed by the Project. The IPC's 2018 review report discusses estimates of \$450 million and \$630 million and a more recent estimate by the proponents is \$777 million (plus or minus 30%).⁷ In discussion with the IPC, the proponents made it clear that having to fill either void would make the Project unviable:

MR WILLS: Both options of filling in either void does have a – is cost-prohibitive to the project from an economic return.

MR PEARSON: So when you say – I just want to be really clear on this point. When you say cost-prohibitive, it means the project – your assessment of the economic feasibility of the project under one void or filling both voids is the same in that the project is unlikely to proceed.

*MR WILLS: Yes.*⁸

The fact that the Project's financial viability depends on the extent of site restoration suggests that it is financially marginal. The viability of this Project is dependent on site restoration below public expectations. The Australia Institute has conducted research on public attitudes to mine site rehabilitation, finding 77 percent of respondents said that mine sites should be "fully rehabilitated", which is described as:

Rehabilitation close to previous natural or farming condition - pits refilled to near original surface level, groundwater protected and original types of vegetation replanted.

A further 11 percent of people opted for "partial rehabilitation", described as:

Pits partially refilled, water pollution minimised, some revegetation of the mine surface but not to original condition.

⁷ IPC (2018) United Wambo coal mine project review report, <https://majorprojects.accelo.com/public/f1975ab4293a40166f95b55544979c4a/03.%20IPCN%20-%20United%20Wambo%20Review%20Report.pdf>, Umwelt (2018) United Wambo coal mine project: Response to IPC recommendations appendices, <https://majorprojects.accelo.com/public/8c0b55a30b1449b1c7498cbced1f63f8/United%20Wambo%20Response%20to%20IPC%20Appendices.pdf>

⁸ IPC (2018) Meeting with applicant re: United Wambo Open Cut Coal Mine Project,

Less than 1 percent of people felt that it was acceptable for “pits [to] remain and fill with saline or acidic groundwater, dirt and rock piles remain in a fenced off area.” The final 12 percent responded “don’t know/not sure”.⁹

The proponents commissioned Deloitte to develop present value estimates of the costs of filling the two voids. Deloitte’s calculations are \$274 million, \$129 million and \$63 million at discount rates of 4%, 7% and 10% respectively. The proponents prefer to use a lower discount rate as:

MR WILLS: In terms of the discount rate, obviously, the – a project is assessed around its return on investment, and a discount rate, of, typically, seven per cent is reasonably applied in some circumstances, and that discount rate reflects the fact that there’s a cost and a revenue element to it, and there’s a risk associated with the revenue. Hence why a higher value for discount. In the exercise for filling in the void, it was a discrete project. It’s essentially akin to a social or a public infrastructure work. So there’s no revenue risk associated with it. Hence the independent experts feel that it’s more appropriate to have a lower discount rate of four per cent, which is similar to the – say a public infrastructure works or a social factor associated with this type of activity.¹⁰

Filling in mine voids and mine site rehabilitation are activities carried out to reduce costs to the public and environment of mining activities, aiming to provide a community benefit. This is relatively low risk, as it is fairly certain that the public will experience fewer environmental costs if sites are adequately rehabilitated, so a lower discount rate may well be appropriate. Some economists even argue for a discount rate of zero in relation to particular social costs such as climate change.

The reason low discount rates are used for policies and projects that protect or restore the environment is that the benefits are near-certain, long lasting and accrue widely to the community. However, these benefits are ignored in the proponents’ assessment, including the appendices by Deloitte and Umwelt. There has been no attempt to quantify what the benefits might be to the NSW community of not having these voids and very saline lakes in the Hunter Valley. Nor is there any real attempt to discuss this qualitatively. If the filling of the voids is to be treated as a ‘discrete project’, then the discreet benefits of the project need to be considered along with the cost.

⁹ Campbell (2016) *Public opinion on mine site rehabilitation: Briefing note*, <http://www.tai.org.au/sites/default/files/Briefing%20note%20-%20public%20opinion%20on%20mine%20rehabilitation%20FINAL.pdf>

¹⁰ IPC (2018) Meeting with applicant re: United Wambo Open Cut Coal Mine Project,

If considered as a discrete project, the costs associated with void filling are largely borne by the foreign-owned proponents and the benefits would be largely enjoyed by the NSW community. If this project was assessed in line with the *NSW Guidelines on economic assessment of mining and coal seam gas projects*, which specify conducting assessment from the perspective of the NSW community, it would almost certainly deliver a net benefit, particularly at low discount rates.

Clearly this is not a discrete project. It is entirely dependent on the United Wambo Project to create the voids in the first place, and hopefully sufficient economic surplus to pay for them to be filled in. Therefore, the costs around filling in voids should be considered in relation to the other costs and benefits of the Project.

The point of discounting future streams of costs and benefits is to enable them to be compared in 'present value'. While all the costs and benefits may occur at different points in the future, giving some more and less certainty, the aim of converting to present value is to enable a comparison on even terms.

Deloitte's economic assessment of the Project provides a present value breakdown of all Project costs and benefits, reproduced in Figure 4 below:

Figure 4: Deloitte estimates of present value costs and benefits at 7% discount rate

Item	Project case (\$m, NPV)
Revenue	5,178
Gross mining revenue	5,178
Residual value of land	-
Residual value of capital	-
Costs	4,260
Operating costs	3,902
Capital costs	322
Rehabilitation and decommissioning costs*	17
Environmental mitigation costs*	10
Transport management costs*	-
Purchase costs for land	9
Local contributions	-
Taxes	242
Corporate income tax ²	208
Payroll tax	27
Local government rates	6
Royalties	408
Ad valorem coal royalties	408
Net producer surplus	268

Source: Deloitte (2016) United Wambo Economic Assessment

Deloitte's assessment shows a net producer surplus, a measure related to profit, of present value \$268 million. According to Deloitte's figures, the void filling project with its present value cost of \$129 million (7%) could easily be included leaving a net benefit to the proponents of \$139 million. If Deloitte's estimates are correct the Project could still proceed, and a substantial benefit be derived by the proponents.

This is perhaps why the proponents argue for a lower discount rate to be applied to this cost (while ignoring relevant benefits). The present value cost of the void filling project is \$274 million (4%), just outweighing Deloitte's \$268 million (7%) estimate of producer surplus. Only by selecting convenient discount rates can these estimates provide a case to proceed with the mine, but not fill in the voids.

The proponents argue in the appendices and in discussion with the IPC that the cost of land in the region on a per hectare basis is far lower than the costs of filling in the voids on a per hectare basis and therefore the void filling exercise is unwarranted. While a useful comparison for the proponents, this is not a correct analysis from an economic perspective. The market price of similar land reflects scarcity and market estimates of future rents or benefits of the land. This does not reflect the environmental and social costs of having large voids and saline lakes in the region.

Points from earlier submissions

Points raised in our earlier submissions on company tax calculations and biodiversity impacts have not been addressed and are repeated here.

COMPANY TAX CALCULATIONS

A key flaw in the 2015 NSW *Guidelines for the use of Cost Benefit Analysis in mining and coal seam gas proposals* is the treatment of company tax calculations. Economists do not have the skills or data to accurately predict corporate income tax payments, particularly for companies such as Peabody and Glencore, both of which are notorious for not paying any. The RtS accepts yet dismisses this point:

The overall tax position of the proponents is beyond the scope of the CBA. The CBA focuses on the first round (primary) impacts of the Project. (p12)

This is not correct. The ‘first round’ of the CBA is assessing consumer surplus. Estimating how much of that surplus would then accrue to governments is a ‘second round’ that should involve more than simply applying a simplistic headline rate of 30% corporate tax to producer surplus. We note that CIE assume zero company tax receipts in their ‘minimum threshold’ analysis. (2016 report, p2)

BIODIVERSITY IMPACTS

The Deloitte assessment, CIE reviews and RtS all assume that biodiversity offsets work perfectly and reduce any impacts to zero. While this is a convenient assumption for economists, as pointed out in our submission, professional ecologists do not accept this assumption.¹¹

¹¹ See for example, Bekessy et al (2010), The biodiversity bank cannot be a lending bank, <http://onlinelibrary.wiley.com/doi/10.1111/j.1755-263X.2010.00110.x/abstract> as well as submissions on the Wambo project by Dr Matthew Currell, RMIT, submitted as part of the Hunter Environment Lobby submission

Conclusion

Assessment of new coal projects in NSW needs to be made in the context of declining global coal demand, a trend that will increase as the world acts on climate change. While it may be possible to sell all the coal from the United Wambo proposal, consideration needs to be given to whether this represents any kind of net benefit to the Hunter and a more detailed examination of what risks it presents.

These issues have been inadequately considered in the assessment of the United Wambo Project. The IPC should reject proposals for major coal expansions until an assessment has been made of how the Hunter coal industry can best proceed and maximise benefits to the community in a carbon constrained future.