



Review of the Continuation of Boggabri Coal Mine Economic Assessment:
Response to proponent's response to submissions

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Background

In February 2011, Economists at Large assisted the Maules Creek Community Council (MCCC) with their response to the proposed extension of the Boggabri Coal Mine. We reviewed *Appendix Q – Economic Assessment* of the environmental impact statement (EIS) prepared for the extension project and the MCCC used our review in their submission on the EIS. In March 2011, the authors of the EIS responded to submissions. This document is our response to the authors March response.

Introduction

Economists at Large remain concerned about the benefits of the Boggabri extension project and the methodology employed in the Economic Assessment despite the response by the proponents to our submission. Our main concern remains the use and calculation of net production benefits without proper consideration of whether this benefit is relevant at the community level or state-wide scale. This is of the utmost importance as without this figure, other costs that were dismissed as being immaterial relative to the benefits of the project – costs that will be borne by the local community – become very significant.

This document begins with discussion of the most important point – net production benefits in the cost-benefit analysis. In light of this, we will then return to our other two original concerns:

- Omission and miscalculation of external costs and benefits.
- A lack of alternative scenarios

These points lead to the conclusion that the MCCC have realised from the beginning of this project: that the extension of the Boggabri mine presents the operators with huge profit, the state of NSW with modest royalties and the local community with at best dubious benefit and at worst considerable damage.

Net production benefits

Scale of analysis

In response to our questioning the inclusion of private profit in analysis at a community or state level, the economics assessment author responded with a discussion of producer and consumer surplus. We are familiar with welfare economics and find the author's ideas misleading. The welfare economics approach requires framing of the analysis at a consistent scale. This is not the case in this analysis.

The framing of the author's analysis switches from the universal to the local as it suits the proponents. The most important example of this is that the costs of carbon emissions are considered from the global perspective, while the opportunity cost of capital is considered at the project level. The author points out that if this project does not proceed consumers "*will burn coal whether sourced from the Project or from some other mine.*" (Response to Submissions p55) This means that the carbon dioxide emissions of burning the coal are not the responsibility of the mine, but the responsibilities of the buyers.

In contrast, opportunity cost of capital is considered strictly at the project level - the \$8m figure is the next best use of the proponent's capital equipment, its resale value. However, at a global level, just as the opportunity for consumers to buy coal will come from "some other mine", the opportunities for investors to invest in coal production will also come from "some other mine". From this global perspective, we need to deduct the opportunity cost of the next best coal project. While capital market investors may consider investing in the Boggabri mine, they will include in their decision making the opportunity cost of their capital, ie the next most profitable project. The economic assessment does not consider the next best project, or even alternative approaches to this project (see below).

To put this in the context of welfare economics, the implication of assessing opportunity cost of capital from the global level means that there is also little producer surplus. The net production benefits of \$1.3 billion outlined in the project assessment is not producer surplus to the world. The framing of the analysis shifts from the global to the specific here. This is producer surplus that accrues only to one producer – the project proponents.

We maintain that the inclusion of financial benefits that accrue only to the project proponents are of limited relevance in trying to understand this project's impact on a local or state scale. On a global scale the opportunity cost of investors' capital will negate this value considerably. If we remove net production benefits from the analysis, we see that many concerns that were dismissed as having "*no discernable effect on a Project with an estimated net benefit of \$1.4 B*" (Response to Submissions p55) are in fact significant.

Distribution of costs and benefits

Even given its problems, the assessment would have been of more value if it included serious discussion about the distribution of the net production benefits of the mine. Instead the proponent’s entire “discussion” of this issue was:

“(benefits will be) distributed amongst a range of stakeholders including:

- *The local community in the form of donations and community support programs;*
- *Boggabri Coal and its shareholders;*
- *The NSW Government via royalties; and*
- *The Commonwealth Government in the form of Company tax.”* (EA p12 and response p54)

This was not quantified any further. There is no further information about these donations and community support programs. Unless these turn out to be extraordinarily generous, it is our conclusion that the benefits of this mine accrue largely to Idemitsu shareholders, modestly to the NSW and commonwealth governments and minutely to the local community. Meanwhile potential external costs are born entirely by the community.

Table 1. shows the distribution of costs and benefits by the extension project. None of the values relevant at the local level have been quantified. Note that the social benefit of employment accrues largely at the state level. The study used to calculate this uses a value that largely city-based households place on rural employment. This is aggregated across all households in NSW to get the calculated value. This value is further discussed in the next section.

Table 1 – Distribution of benefits and costs

	Benefits	Costs
Global	After tax profits	Greenhouse gasses
National	Company tax	
State	Royalties Social benefits of employment	
Local	Unquantified and unspecified community support programs	Air quality Noise and vibration Ecology Groundwater Traffic Heritage Visual impacts Surface water Health impacts

Externalities

In their response to our submission, the proponents concede that they have not attempted to value a range of external costs such as recreational values of the state park, value of the park as a carbon sink, existence values of the woodland, aboriginal heritage values, etc. The reason they have not valued these carefully is that they seem insignificant in relation to the net production benefit value discussed above. However, as that value is misleading, proper analysis of these values is necessary. Other values given a zero value in the original EA, such as air quality, noise and vibration, ecology, groundwater, traffic, visual impacts and surface water should also be re-examined.

Social value of employment

We also believe the value assigned to social value of employment is misleading. We stand by our original criticism, that the value transferred from another study is inappropriate. The response that there are even less conservative values in other studies performed by the author and that an academic has been involved in their preparation is not comforting. None of these studies have been published in a peer-reviewed journal, and academic literature on the topic is not abundant.

Health impacts

Since the publication of the EA and the MCCC response to it, considerable attention in the region has been focused on the health impacts of open-cut coal mining and the long distance transport of coal in uncovered wagons. These costs should also be considered in the study.

Alternative scenarios

The proponents maintain that they need not conduct proper economic analysis of alternatives to the project as they are merely “variants” of it. Semantics aside, the need to assess “variants” and “alternatives” is obvious if net production benefits are not skewing the NPV figure. These different variants and alternatives could have significantly different impacts on a local level, for example using underground mining techniques. In a more balanced assessment, differences between these variants may be the difference between the project being desirable or undesirable.

Without alternative scenarios, the usefulness of cost-benefit analysis (CBA) is also reduced since CBA is typically used to decide between alternative projects.

Conclusion

With the misleading net production benefit figure dominating the EA economic assessment it is difficult to accurately gauge the costs and benefits of this project. They are certainly less than those claimed in the original assessment due to the lack of consideration of opportunity cost of investors' capital and the inadequate valuation of external costs and benefits. It appears that benefits will accrue largely to international investors, while unquantified costs will be borne by the local community. We maintain that the economic assessment of this project needs revision before a being used for decision making.