

Submission to the NSW IPC on the Proposed Dendrobium Mine Extension.

Professor Andrew Hopkins, AO¹

6 December 2020

I wish to comment on the Cost Benefit Analysis (CBA) provided by Cadence Economics in Appendix L to the submission by Illawarra Coal. I have written previously about the limitations of cost benefit analyses².

In my view the Cadence Economics CBA fails to deal adequately with issue of greenhouse gas emissions and climate change. I make four claims. The CBA:

- (i) ignores the issue of climate change
- (ii) ignores scope 3 emissions
- (iii) calculates the costs of GHG emissions in an arbitrary and inappropriate way
- (iv) restricts the costs of GHG emissions to NSW in an unjustified way

Climate change

A major reason for opposing any extension of coal mining in NSW, or anywhere else, is that the world must transition to zero emissions as rapidly as possible to avoid disastrous climate change. The climate science behind this claim is indisputable. Given this imperative, we cannot afford any new coal mines. The methodology of the CBA takes no account of this imperative.

Scope 3 emissions

The emissions that will be generated by the mine extension are of three types (the figures are from the DPIE Assessment Report P 150):

- Scope 1. Emissions generated by the mine operations themselves (between 0.59 and 0.77 Mt CO₂-e per annum over the life of the Project)
- Scope 2. Emissions generated in the production of inputs to mining operations, in particular, electricity (about 0.1 Mt CO₂-e per annum)
- Scope 3. Emissions generated by burning the coal that will be produced (about 8.2 Mt CO₂-e per annum.)

Obviously, scope 3 emissions dwarf scope 1 and 2 emissions.

However, under international greenhouse gas (GHG) accounting procedures, Dendrobium is not accountable for scope 3 emissions. BlueScope Steel and other entities in Australia or overseas which make use of the coal will be accountable for the emissions generated by burning it. Scope 3 emissions are therefore ignored in the CBA. The document states

“the analysis does not include any of the costs associated with coal use in NSW, including the scope 3 greenhouse gas emissions”. (p8)

¹ A brief biographical statement is attached.

² https://www.csb.gov/assets/1/7/cba_hurdle_-_hopkins.pdf.

Scope 3 emissions are in effect the elephant in the room. They will make by far the greatest contribution to the greenhouse gas concentrations in the atmosphere, but the methodology of the CBA passes over them with barely a mention.

Governments are beginning to hold fossil fuel companies accountable for their scope 3 emissions. The National Offshore Petroleum Safety and Environmental Management Authority has recently approved a gas project in part because the company was able to argue that the use of gas as a fuel would tend to displace coal, thereby contributing to an overall reduction GHG emissions³. Such an argument is not open to the proponents of coal projects.

Regardless of whether Illawarra Coal is technically accountable for scope 3 emissions, it is unacceptable for a cost/benefit analysis to ignore this issue altogether. From a climate change point of view, what matters is the total emissions that will be generated if this project goes ahead. Any CBA that fails to deal with this issue is incomplete.

Under the NSW State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Act, section 14(2) states:

the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.

The failure of the CBA to consider scope 3 (downstream) emissions means that its conclusions are not relevant to decision making by a “consent authority”. The IPC is the “consent authority” in this matter. It therefore needs to treat the CBA as seriously flawed because of its failure to consider scope 3 emissions.

The calculation of costs of GHG emissions

The CBA calculates the cost of emissions from the proposed mine by adopting a price on carbon of \$13.52 per tonne of CO₂, or equivalent. In no sense is this the cost of the damage that will be done by these emissions. It is the cost which large emitters in Australia pay for carbon credits when they go over the free limit of carbon emissions set for them by government policy⁴. The actual price of these credits is determined by a market mechanism. The government provides carbon credits to people or entities that demonstrate that they have drawn down or will draw certain amounts of carbon out of the atmosphere, sequestering it, usually in vegetable matter or in the ground. These credits can then be sold. Their price is determined by supply (by farmers and the like) and demand (from large emitters going over their limit). In short, this is a price operating in a very particular and limited market, one that is created by particular Australian government policies. The price of carbon credits is entirely dependent on these policies and any change in these policies would lead to a change in supply or demand and hence a change in the price. There are other contexts around the world where government policies have led to very different prices being put on carbon. All such prices are the outcome of policies designed to provide a market incentive for polluters to change their behaviour. They bear no relationship to the cost of the damage done by these emissions in contributing to climate

³ NOPSEMA , Acceptance of Woodside’s Scarborough Offshore Project Proposal, Background Brief, 30 March 2020. <https://www.nopsema.gov.au/assets/Freedom-of-information/FOI-136/A735762.pdf>
See also NOPSEMA, Acceptance of Scarborough Offshore Project Proposal, Statement of Reasons, 6 April 2020, pp9, 21,22

⁴ <https://theconversation.com/the-nationals-should-support-carbon-farming-not-coal-94112>

change. To use the figure of \$13.52 per tonne as the cost of emissions in the context of this CBA is a fundamental mistake in logic.

The CBA makes no effort to estimate the cost of the damage that will be done by the GHG emissions from the proposed project. To be fair, it is hard to imagine how that might be done. But unless the effort is made, there is no way that the economic benefits of the project can be weighed against its environmental costs.

The cost to NSW

Based on the figure of \$13.52 per tonne, the CBA estimates that the total cost of GHG emissions from the Dendrobium extension will be \$111 million (always remembering that this excludes scope 3 emissions).

But the CBA is concerned with cost and benefits to NSW. It calculates the population of NSW is roughly one thousandth of the world's population. On this basis it attributes one thousandth of this cost to NSW. This implies that the other 99.9% of the costs will be borne by the rest of the world, including other states of Australia. In this way the economic benefits of the mine extension accrue to the population of NSW but the emissions costs are almost entirely externalised. This is, to say the least, a bizarre outcome. But in any case, it makes no sense from a climate change point of view. We are all in this together. The cost to humanity of climate change, if we fail to check it, will be enormous and quite incalculable. One has only to think of the fate that will likely befall climate change refugees as sea levels rise to get a sense of what the not too distant future may hold.

Conclusion

The cost/benefit analysis under discussion is massively flawed in its treatment of the costs of GHG emissions. It therefore cannot be used to compare the costs and benefits of the proposed mine extension. For this reason, I oppose the proposal.