Rix's Creek Extension Project

Submission

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December 2015

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INTRODUCTION

The economic assessment of the Rix's Creek Extension Project, written by consultants KPMG, heavily overstates the benefits of the project while largely ignoring potential costs. Key flaws are:

- High coal prices.
- Unorthodox treatment of wages.
- Assumption that most external costs are fully offset or mitigated, with no consideration of risk around these impacts.
- Minimal detail provided on economic impact assessment.

COAL PRICES

KPMG base their revenue estimate on World Bank forecasts of Australian thermal coal prices. The prices used are shown in Table 4-5 of the assessment. No date is provided for the source of their forecasts, however the prices used are higher than the World Bank's estimates for January, April and July 2015 and far higher than the latest October 2015 forecast, as shown below:

Table 1: KPMG and World Bank Price Forecasts (nominal USD/tonne)

Year	KPMG forecast	January 2015 World Bank forecast	April 2015 World Bank forecast	July 2015 World Bank forecast	October 2015 World Bank forecast
2013	84.6	84.6	84.6	84.6	84.6
2014	77	70.1	70.1	70.1	70.1
2015	79	67	62	58	58
2016	80.9	69.7	64.4	59.5	50
2017	82.8	72.6	66.8	61.1	51.9
2018	84.8	75.6	69.3	62.6	53.9
2019	86.8	78.6	72	64.3	55.9
2020	88.9	81.9	74.7	66	58.1
2021	91	85.2	77.5	67.7	NA
2022	93.2	88.7	80.5	69.4	NA
2023	95.4	92.3	83.5	71.2	NA
2024	97.7	96.1	86.7	73.1	NA
2025	100	100	90	75	70

Sources: World Bank Commodity Markets Outlook, January, April, July and October 2015.[1]

[1] Available at: https://www.worldbank.org/content/dam/Worldbank/GEP/GEP2015b/Global-Economic-Prospects-CommodityMarketOutlook_Jan2015.pdf;

KPMG's economic assessment of the Rix's Creek project is dated July 2015. It is unclear why the authors did not use up-to-date forecasts from the World Bank from that month, or at least from earlier in 2015. Their use of outdated data serves to overstate the value of the project and should be corrected.

Based on the latest World Bank forecasts and the production schedule outlined in KPMG's Chart 4-3, the present value revenue of the project is $687 million at a 7% discount rate. This lower revenue estimate makes the project financially marginal and may not cover capital and operating costs.

Note that this revenue estimate is in present value US dollars and relates to production from 2019 to 2038. This is because 2018 is the final year that the project will produce coal under the base case scenario, as shown in Chart 4-3. It appears that KPMG's revenue forecast of $997.5 million is also in present value US dollars for the 2019 to 2038 period, as our calculation using their price forecast and Chart 4-3 is $997.1 million. As our estimate is based on sight reading of Chart 4-3, there is some small discrepancy.

While revenue estimates appear to be in present value US dollars, it is unclear whether other costs and benefits are in Australian dollars or US dollars. There is no discussion of exchange rates or assumed future inflation rates anywhere in the assessment. It appears that KPMG have compared US dollar revenue estimates with Australian dollar costs.

For example, Table 4-6 is sourced from *Australian Bureau of Statistics Catalogue 6302.0 - Average Weekly Earnings, Australia, Nov 2014, TABLE 10I. Average Weekly Earnings, Industry, Australia (Dollars) - Original - Persons, Total Earnings*.[2] These figures are clearly in 2014 Australian dollars and serve as the basis for KPMG's estimate of 'wage premium' in Table 4.7.

KPMG should make it clear what units are being used, what exchange rates have been assumed and where necessary make corrections.

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https://www.worldbank.org/content/dam/Worldbank/GEP/GEPcommodities/GEP2015b_commodity_Apr2015.pdf;
http://www.worldbank.org/content/dam/Worldbank/GEP/GEPcommodities/Price_Forecast_20150722.pdf;
https://openknowledge.worldbank.org/bitstream/handle/10986/22786/CMOOctober2015FullReport.pdf?sequence=1&isAllowed=y;

[2] Note that KPMG incorrectly claim that this refers to NSW weekly earnings by industry, when it is actually for Australia. The catalogue is available here: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6302.0Nov%202014?OpenDocument

WAGE PREMIUM

KPMG assumes that if the project goes ahead, all workers will earn mining industry average wages, whereas if the project does not go ahead, all workers will earn average Hunter Valley wages. This is not a realistic assumption, as many experienced mine workers will go on to work elsewhere in the mining industry.

From an economic perspective, KPMG assume that labour is not priced at its opportunity cost. This is contrary to standard cost benefit analysis assumptions and NSW Treasury Guidelines:

> *The use of resources (manpower, finance or land) in one particular area will preclude their use in any other. Hence the basis for valuing the resources used is the "opportunity cost" of committing resources; ie the value those resources would have in the most attractive alternative use …*
>
> *In certain cases, where a resource has a market price, that price may not reflect the marginal social cost of using the resource. Such cases are reasonably rare.*[3]

Treasury goes on, specifically in relation to labour:

> *It can be argued that in times of unemployment the opportunity cost of labour employed on a project is less than the wage costs, and project costs and benefits should be adjusted accordingly. However, in practice such adjustments are not generally made and are not recommended.*[4]

Estimating these values has not been standard practice in NSW mining assessment over many years. This has been emphasised even by consultants to the coal industry:

> *BCA involves the comparison of the 'with and without' project circumstances. The use of resources with and without the mine must therefore be considered. Without the mine, the resources to be allocated to the mining operation would be engaged in other uses in the economy. These are the opportunity costs of the proposed mine. Given that markets for these resources (land, machinery, labour etc.) in the Australian economy are relatively competitive and not highly distorted by subsidies and regulations, market prices reflect these resources opportunity costs.*[5]

[3] (NSW Treasury 2007) page 44–45

[4] Op cit, page 48

[5] (Bennett 2011) p2

The standard assumption of prices being equal to opportunity cost, including wages, should be applied here and KPMG's results should be corrected to omit this $104.3 million claimed benefit.

EXTERNAL COSTS

KPMG attempts no quantification of external costs other than greenhouse gas emissions. While this may be necessary due to data limitations, KPMG do not consider any degree of uncertainty around any environmental impact.

For example, KPMG identify that threatened species will be impacted, but claim that impacts on ecology will be negligible due to contribution to an offset fund. They do not make it clear to readers that there is considerable debate in the ecology literature as to whether offset programs actually do compensate for such impacts.[6] If they do not, then this cost will be borne by the community and the value of the project will be overstated.

Another example is noise. Although noting that noise levels will be similar to current levels, KPMG fail to compare this to the baseline scenario of no extension to the mine. Even if noise levels from the extension are similar to current levels, this is much higher than would be the case if the mine finishes production in 2018 and there is no mine noise for the following 20 years. This cost will be borne by the community and ignoring it serves to overstate the value of the project.

ECONOMIC IMPACT ASSESSMENT

KPMG provide estimates of changes to value added and employment, based on a computable general equilibrium (CGE) model. No information is provided as to the data that was put into the model, nor the assumptions that the model is based on. There are various types of CGE model, but no discussion is provided as to which type has been used here.

One result that should be explained is the estimate that the project will increase mining employment in the wider NSW mining industry by a greater amount than in the local area. This is counterintuitive as the project will compete with other NSW mines for labour, other inputs and sales. Other CGE models of coal projects have shown a reduction in mining employment outside of the project.[7]

[6] see for example (Bekessy et al. 2010)
[7] see for example (Fahrer 2015)

Economic models are easily manipulated by their users and their results depend on the data and assumptions behind them. Decision makers should place little faith in modelling results that do not have transparent explanations of the model's inputs and assumptions.

CONCLUSION

There are serious flaws in KPMG's economic assessment of the Rix's Creek project. The lower coal price alone makes the financial and economic viability of the project questionable. If the project is financially marginal, management will have strong incentive to cut corners on safety and environmental standards, as well as reducing community contributions.

The confusion as to whether key results are in US dollars or Australian dollars makes the analysis difficult to verify. Furthermore, the analysts' approach to wages is unorthodox and serves to overstate the value of the project. The assumption that all external costs will be perfectly compensated for is unrealistic and also overstates the value of the project.

The project poses considerable potential external costs on the local community and should be rejected unless a strong case for economic net benefit to the NSW community can be demonstrated.

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