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Wilpinjong Extension Project
Submission

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The Australia Institute

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SUMMARY

The economic assessment of the Wilpinjong mine heavily overstates the value of the project. This is easily seen by comparing the estimate of the project's net present value, AUD$735 million, with the total stockmarket value of the proponent, only $114 million.

The key flaw in the economic assessment is unrealistic production costs. The assessment assumes the current mine can produce coal for an average per tonne cost of AUD$26. At current exchange rates this would make it the cheapest mine to operate in the entire seaborne market.

Coal prices assumed are also substantially above current prices and many analysts' long-term forecasts of thermal coal prices. The approach taken for domestic coal masks the benefits that the assumed prices would deliver to power station owner, AGL.

Estimates of rehabilitation costs are also understated. Peabody has stated the rehabilitation bond held is in the order of $58 million, while the economic assessment assumes rehabilitation costs of the expansion proposal of only $24 million.

Employment assumptions and wage benefits are also overstated and calculations are contrary to NSW Guidelines for the economic assessment of mining and coal seam gas proposals.

INTRODUCTION

The Wilpinjong Extension Project proposes to expand the existing Wilpinjong coal mine near Mudgee, central New South Wales (NSW). The proponent is troubled US-based coal company, Peabody.

The mine currently produces up to 12 million tonnes per annum (Mtpa) of thermal coal, mainly of a quality below benchmark standards, much of which is contracted to AGL for its Bayswater and Liddell power stations. The expansion proposal is to extend the mine, increasing its planned production for several years and the overall life of the mine to 2033.

An economic assessment of the expansion proposal has been prepared by Deloitte Access Economics (Deloitte) as part of the project's Environmental Impact Statement (EIS). The Deloitte assessment includes a cost benefit analysis (CBA) and an impact assessment using a Computable General Equalibrium (CGE) model.

The Australia Institute welcomes the opportunity to make a submission on the economic assessment of the Wilpenjong project. In our opinion, the assessment is flawed, ignores the financial state of Peabody and heavily overstates the value of the project.

PROJECT VALUE

The Deloitte CBA concludes that the Wilpinjong project has a net present value of $735 million. This is a surprising conclusion given that the entire market value of the proponent, Peabody, is a fraction of this amount, currently US$84 million, approximately AUD$114 million.[1] The fact that the project is valued six and a half times higher than the parent company should raise concerns about the assessment and the proponent. Three possibilities arise from this observation:

- The stockmarket is heavily undervaluing Peabody shares,
- The Deloitte estimate overvalues the project, or
- Peabody has other liabilities and financial difficulties that strongly outweigh any benefits from this project.

In our view the problem is a combination of the second and third points. The following sections will discuss reasons why the Deloitte estimate is overvalued. First we discuss the implications of Peabody's financial difficulties.

PEABODY FINANCIAL SITUATION

Peabody is in dire financial straits. The company has lost almost all of its market value in the last five years, as shown in Figure 1 below:

[1] Yahoo! Finance, accessed 9 March 2016: https://au.finance.yahoo.com/echarts?s=BTU#symbol=BTU;range=5y

Figure 1: Peabody share price

Source: Yahoo! Finance https://au.finance.yahoo.com/echarts?s=BTU#symbol=BTU;range=5y

A sample of headlines from a news search for Peabody Energy includes:

- *Is Peabody Energy Preparing for Bankruptcy*?[2]
- *From hero to zero: Peabody Energy Corp*.[3]
- *Peabody's lenders recommend the company declare bankruptcy*.[4]
- *Illinois taxpayers could get stuck with $92 million in Peabody energy's mine reclamation costs.*[5]

The last headline should be of particular concern to decision makers and the NSW community looking at the Wilpinjong expansion proposal. If Peabody does go bankrupt the project will be left in limbo and the state will be forced to fight with other creditors to ensure rehabilitation expenses can be raised.

It is inconceivable that a major accounting, finance and economics consultancy like Deloitte would not be aware of the risk of Peabody's bankruptcy and implications for this project. The purpose of their assessment appears to be advocacy for their client rather than provision of useful and accurate information for decision makers and the NSW community.

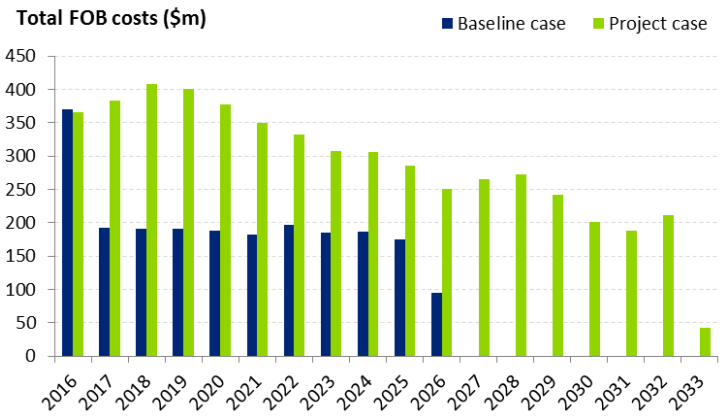
[2] http://247wallst.com/energy-business/2016/03/06/is-peabody-energy-preparing-for-bankruptcy/
[3] https://www.economist.com/sites/default/files/case_resolution_fictconsulting.pdf
[4] http://trib.com/business/energy/peabody-s-lenders-recommend-the-company-declare-bankruptcy/article_2d1cf2d8-8c48-591f-9dda-4c25c496dabd.html
[5] http://www.rebootillinois.com/2016/03/07/editors-picks/hlearner/illinois-taxpayers-could-get-stuck-with-92-million-in-peabody-energys-mine-reclamation-costs/54048/

OVERVALUATION OF WILPINJONG PROJECT

The key reason why the Deloitte assessment overvalues the project is that it assumes its operating costs are very low. This applies to both the baseline project and the expansion proposal. If Deloitte's estimates are accepted, Wilpinjong is the cheapest mine to operate in the world on a per tonne basis.

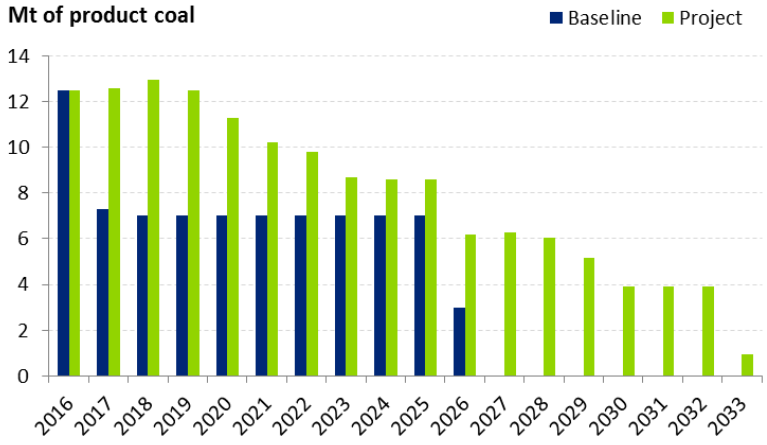
The total free-on-board (FOB) costs and total production of the mine in Deloitte's assessment are shown below:

Figure 2: Total costs of Wilpinjong mine and expansion proposal



Source: Deloitte assessment, page 29

Figure 3: Production of Wilpinjong mine and expansion proposal



Source: Deloitte assessment, page 22

Dividing the costs and volumes in these figures gives an approximate per tonne cost for the existing mine and expansion proposal. Exact numbers are not provided in the assessment, the numbers below are taken by sight from these charts.

Table 1: Per tonne cost calculations

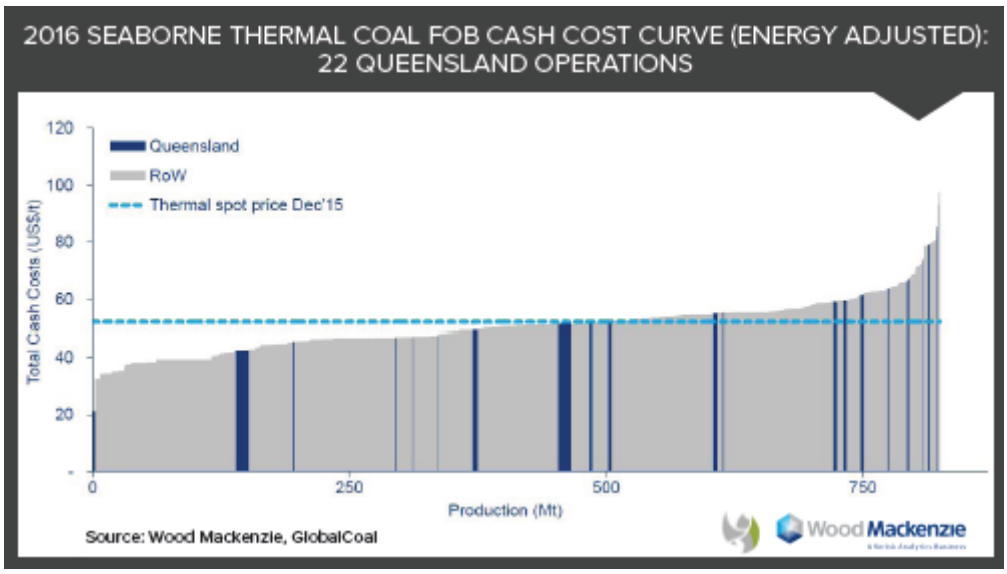
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Total FOB costs baseline	**AUD$m**	$360	$185	$185	$185	$185	$180	$195	$180	$180	$175	$95							
Production baseline	**Mt**	12.2	7.1	7	7	7	7	7	7	7	7	3							
Costs per tonne	**AUD$/t**	$29.51	$26.06	$26.43	$26.43	$26.43	$25.71	$27.86	$25.71	$25.71	$25.00	$31.67							
Total FOB costs project	**AUD$m**	$359	$380	$405	$400	$357	$350	$325	$305	$305	$290	$250	$260	$270	$245	$200	$190	$210	$40
Production project	**Mt**	12.2	12.2	12.6	12.2	11.1	10.1	9.9	8.5	8.5	8.5	6.1	6.1	6.1	5	3.9	3.9	3.9	0.8
Costs per tonne	**AUD$/t**	$29.43	$31.15	$32.14	$32.79	$32.16	$34.65	$32.83	$35.88	$35.88	$34.12	$40.98	$42.62	$44.26	$49.00	$51.28	$48.72	$53.85	$50.00
Average baseline AUD	**AUD$/t**	$26.96																	
Average project AUD	**AUD$/t**	$39.54																	

Source: Visual estimate of Figures 2 and 3 above

Table 1 shows that the Deloitte assessment assumes an average cost per tonne of AUD$26.96 for the baseline mine and AUD$39.54 per tonne for the expansion project. To compare this to mines around the world, we need to convert to US dollars per tonne. At time of writing the exchange rate was 0.74208, making these costs $US20.00 and $US29.34.[6]

Research recently published by analysts Wood Mackenzie and the Queensland Resource Council shows the US dollar operating costs of mines internationally. Figure 4 below shows the global cost curve for thermal coal mines, with Queensland mines shown in dark blue:

Figure 4: Thermal coal cost curve



Source: Queensland Resource Council (2015) State of the sector.[7]

Figure 4 shows that there are very few mines in the world that can produce at below $US40 per tonne. The mine with the lowest operating costs in Figure 4, next to the vertical axis appears to have operating costs of around $21 per tonne. Deloitte's assessment assumes that the baseline project can produce even cheaper than this and that the expansion project would also have among the lowest operating costs in the world.

In our view the cost estimates in Deloitte's assessment are unrealistic and work to heavily overstate the value of the project.

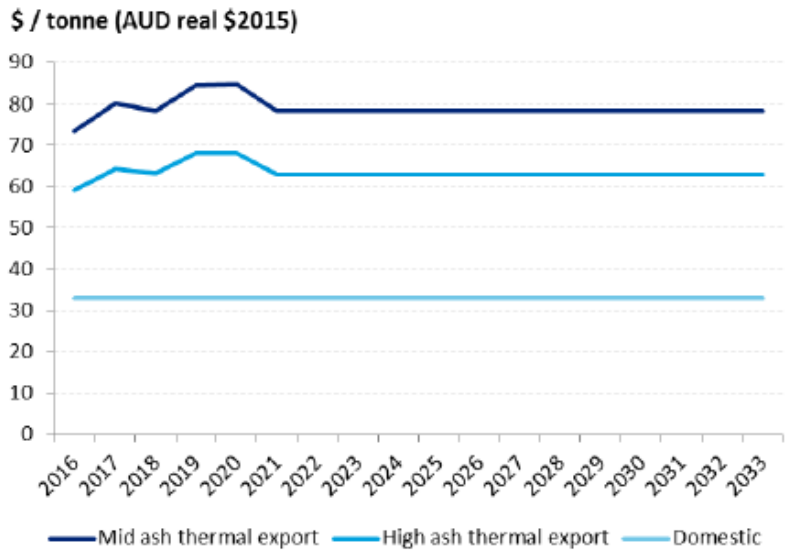
[6] www.xe.com accessed 9 March

[7] https://www.qrc.org.au/_dbase_upl/State%20of%20the%20Sector_DecQtr15.pdf

COAL PRICES

Deloitte use three different coal prices for three different grades of coal, or "product types". The coal prices used in the economic assessment are shown in Figure 5 below:

Figure 5: Coal price forecasts by product type



Source: Deloitte assessment, page 23

The main price assumed for the "mid ash" is around AUD$79 per tonne and for the "high ash" coal AUD$63 per tonne. These prices reflect Deloitte's source for benchmark prices, dated June 2015, and the discount from benchmark calculated by Peabody. These prices are higher than current coal prices at current exchange rates which are $67.62 and $54.39 per tonne, as shown in Table 2 below:

Table 2: Current coal prices

Current benchmark price	USD	54.54
Exchange rate	USD:AUD	0.74
AUD benchmark price	AUD	73.50
Discount - mid ash		8%
Discount - high ash		26%
Current price mid ash	AUD	$ 67.62
Current price high ash	AUD	$ 54.39

Sources: Deloitte assessment, Indexmundi.com, xe.com

These are also much higher than the latest long term forecasts, such as that by Goldman Sachs of $USD42.50 per tonne for Newcastle benchmark coal. [8]

[8] Goldman Sachs Commodities Research, 2016, *Heat Sensor: Overpowered*

Baseline price

The price used for "domestic" coal throughout the assessment is AUD$32.90 per tonne. Deloitte value all of the coal produced without the expansion at this low price, not because of its quality, but because it is under contract to AGL, the owner of Liddell and Bayswater power stations:

> *[Baseline production] predominantly comprises thermal coal that will be sold to domestic customers as part of existing contracts (73.0 Mt).*[9]

Deloitte provide no information about the quality of the baseline coal production. It is likely to be of similar quality or perhaps better than the coal produced by the expansion proposal, as normally a mine would target higher quality minerals first, with later expansions moving to lower quality or more expensive reserves.

What is important for CBA under NSW guidelines and standard practice is not the price that is paid to Peabody, but the market value of the coal itself. If this coal could attract a higher price outside of these contracts, that is the value that should be used in the economic assessment.

If the contracts with local power stations are preventing the coal from selling for its true value, this means there is substantial economic benefit accruing to the buyers, AGL, who are buying for below market value. This benefit should be included in the calculations of the overall benefit of the project, but would not appear in Peabody's own financial assessments. Deloitte's approach evaluates the baseline scenario from the perspective of Peabody, not from the perspective of NSW.

This apparent error does not change the NPV of the project if corrected, as it would increase the value of both the baseline and the expansion proposal in the same way under Deloitte's production assumptions. The problem is that this approach masks the fact that AGL are receiving substantial benefit, apparently at Peabody's expense. Rather than pursuing the expansion proposal, the public interest may be best served by renegotiating contracts with AGL. Deloitte's source document from AGL says "Wilpinjong contract includes optionality to flex volumes" suggesting that such renegotiation is possible.[10]

REHABILITATION AND DECOMMISSIONING COSTS

Deloitte estimate total rehabilitation costs of AUD$18.29 million for the baseline and $23.69 million under the expansion proposal. This is far lower than Peabody's own estimates of the rehabilitation liabilities of the existing mine. Peabody has stated that the rehabilitation bond

[9] Deloitte assessment, page 21

[10] AGL (2014) Macquarie Generation Acquisition, p7

for the project is "in the vicinity of $58 million."[11] Deloitte and Peabody should explain this contradiction and correct the assessment.

It is unlikely that the rehabilitation bond would be higher than the total estimated liability. Given Peabody's precarious financial situation, this leaves the clear possibility that the NSW public could be left to pay for rehabilitation of the site.

The expansion proposal allows Peabody to delay rehabilitation and decommissioning costs. Deloitte's assessment treats the delay in rehabilitation and decommissioning costs as a benefit, with the delay in decommissioning costs given a value of $6.4 million in the CBA. While this represents a benefit to Peabody, the delay may represent a cost to the region and NSW, as the restoration of the site, along with its use or non-use values are also delayed.

EMPLOYMENT

The Deloitte assessment suggests that 500 people currently work at the Wilpinjong mine (see Chart 4.1 of their assessment). This is contradicted by Peabody itself, which has said that staff reductions have occurred and the mine has between 420 and 440 workers.[12]

The uncertainty around employment numbers is important, as Deloitte claim a benefit to the region and NSW of increased wages - $267 million and $297 million respectively. If employment figures for the project are overstated, these estimates will also be overstated. It is important to note that the proponents provide these estimates with no obligation to actually employ this number of people. By providing higher estimates they are able to overstate the value of the project without needing to employ this number of people in the future.

It is important to note that regional and state benefits from wages may not exist at all. This relies on the assumption that workers are paid above the opportunity cost of their labour. As the *NSW Guidelines for the economic assessment of mining and coal seam gas proposals* point out, "an appropriate starting assumption should be that workers do not receive a wage premium."[13]

If such a premium does exist, Deloitte overstate its value by comparing mining wages to the average wage in the region (see page 55, dot point 2). This is contrary to the Guidelines which clearly points out any economic benefit to workers is the difference between their reservation wage for working in the mining industry and the wage being offered. Clearly there is a higher reservation wage for work in the mining industry than other industries; otherwise the mining wages would not be at higher levels.

[11] Minutes of the Wilpinjong Coal Mine Community Consultative Committee dated 28 September 2015, page 3.

[12] Wilpinjong Coal Mine Community Consultative Committee minutes dated 15 June 2015.

[13] Department of Planning and Environment (2015) Guidelines for the economic assessment of mining and coal seam gas proposals, page 13.

Because of these uncertainties, Deloitte's estimates of regional and NSW benefits from wages should be treated as speculative.

CONCLUSION

The economic assessment of the Wilpinjong mine overstates the benefits of the mine and understates its costs. It ignores the financial state of the proponents, Peabody, a company which many observers expect to file for bankruptcy protection in the near future.

Without improved assessment giving a realistic estimate of the project's costs and benefits and presenting a strong case that the project's benefits outweigh its costs, the project should be rejected.