Review of Wallarah 2 Coal Project Environmental Impact Statement

Appendix W Economic Impact Assessment

Prepared by

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Introduction

Economists at Large have reviewed Appendix W Economic Impact Assessment of the Wallarah 2 coal project, written by Gillespie Economics. We are concerned that the assessment overstates the economic case for the project and that there is a major lack of transparency around key calculations. The results from this appendix are used heavily in the project justification section of the environmental impact statement. Without confidence in these results it is impossible for decision makers to make an informed assessment of this project.

Financial considerations

While the financial viability of the project is the responsibility of the proponent, decision makers should understand that the reliability, timing and level of royalties and employment is dependent on the project operating as planned. If the project is delayed or cancelled, the level of these benefits will be reduced in present value terms. This is particularly important in the current economic conditions for coal projects. As recently noted in the Australian Financial Review:

> *The number of Australian coal projects that look to have a realistic chance of being approved in this market would fit on one hand….With coal prices low and Australian mining costs high, it would take a very brave board to approve a greenfields project.* (Freed 2013)

The risk from an Australian or NSW perspective is that proponents may gain approval but not proceed with the project for some years, or may sell the project to different developers. This not only delays royalty streams, but keeps local communities in a state of uncertainty. Given the strength of community opposition to this project this is clearly undesirable.

The economic assessment by Gillespie Economics does not contain sufficiently transparent analysis to provide confidence in a number of assumptions.

Calculation of NSW and Australian benefits

The most important results from the economic appendix for Australian and NSW decision makers to consider are the net present benefits to Australia, estimated by Gillespie Economics at $346m. This consists of present value royalties to NSW of $207m and commonwealth taxes of $139m.

Royalties

There is no discussion in the economic assessment of what royalty rate has been applied in this calculation. NSW coal royalty rates vary depending on the type of mining and the depth of operations see (NSW DII 2008). This is particularly concerning given the NSW Auditor General's finding that:

> *DII cannot assure the people of NSW that all royalties owed are being paid in full. This is because it does not have sufficiently robust systems and processes to identify what is owed and to make sure it is paid.* (NSW Auditor General 2010) p2

Commonwealth taxes

Gillespie Economics' estimate of $139m in tax revenue to the commonwealth is not explained. It seems to be based on applying a tax rate of 30% to revenues less royalties. While a corporate tax rate of 30% is theoretically faced by companies, mining companies receive a wide range of rebates, tax exemptions and depreciation allowances, see (Grudnoff 2012). The effective tax rate they face is, therefore, much lower. (Richardson & Denniss 2011) estimate the effective corporate tax rate faced by mining companies in Australia at 13.9%, while (Markle & Shackelford 2009) estimated this rate at 17%. Using these findings, commonwealth taxes could be as low as $64m, meaning the economic assessment could overstate this value by $75m.

For a thorough understanding of the royalty and tax implications of the project, details on several key financial aspects of the project are required. These are inadequately provided in the economic assessment and the EIS main volume.

Production

Neither the economic appendix, nor the main body of the EIS contains even an indicative production schedule. Without this information and explanation of the assumptions behind the forecast, it is difficult to assess the project's sensitivity to other factors, particularly in early years of production. All readers are told is the project hopes to produce "run of mine" coal at a level of 5 million tonnes per year. No indication is given as to what quantity of actual saleable coal will be produced. These numbers are clearly important to calculating royalty and tax revenue and to understanding the viability of the project.

Price

Gillespie Economics' assessment is based on a Newcastle benchmark thermal coal price of $AUD99/tonne. This is in line with analysts' expectations such as (CBA 2013), of a $USD90/t price and an exchange rate of 0.88. Unfortunately there is no discussion of the specifications of the coal and how that might change through the life of the project. Table 14.1 of Appendix C Geology report of the EIS suggests ash content higher than the Newcastle benchmark, which may result in a discount, although calorific values may improve the price received. As royalties are based on marketable value, this is an important consideration for decision makers.

Costs

There is very little information in the economic assessment about capital, mining, processing and transport costs. On page 11 Gillespie Economics state:

> *The annual operating costs of the project include those associated with mining, environmental management and monitoring, ROM coal processing, water treatment, administration and coal rail transport. Average annual operating costs of the Project (excluding royalties) are estimated at $192m.*

This seems unrealistically low. Assuming that the project produced 4mtpa of saleable coal, this implies cash costs to free on board in Newcastle of $48/t. This would make it one of the cheapest

mines in Australia, as most NSW coal mines have cash costs per tonne of between $55-80/t. While this consideration would not affect state royalties, it would affect commonwealth tax payments, which are based on income rather than production volume.

Wider economic considerations

Social value of employment

The values claimed as social value of employment are misleading. We have argued this in submissions on the Boggabri Coal Project, Warkworth Coal Project, Maules Creek Coal Project, Coborra project and others. The proponents of the Maules Creek Coal Project commissioned Professor Jeff Bennett of the Australian National University to review the economic assessment of that project, also by Gillespie Economics, which also included a "social value of employment". In relation to the inclusion of this value, Professor Bennett said:

> [The] *EIA's inclusion of benefits associated with employment* [is contentious]. *The argument advanced is that people outside of the mine workforce enjoy benefits associated with people having jobs in the mine. The values of this 'existence benefit' of work estimated for the case of a mine in the southern coal field are 'transferred' to the current case. A number of points argue against this approach. First, there is a conceptual issue. In a fully employed economy, it is doubtful that people employed in the new mine would be drawn from the ranks of the unemployed. So people outside the mine are unlikely to hold any existence benefits for the jobs provided by the mine in that case. Second, there is an estimation issue concerning the use of a benefit estimate transferred from another context. The conditions in the southern coalfield – the context of the source of the benefit estimate are very different from the proposed mine context…..* [The] *inclusion of the employment benefit as a component of the EIA is not recommended. Their inclusion would overstate the extent of proposal benefits.* (Bennett 2011)

These are the words of one of Australia's most senior academic economists and the lead author of one of the papers Gillespie Economics cite to justify their inclusion of this value. Professor Bennett is not alone in his criticisms of Gillespie Economics' use of a social value of employment. Other prominent academics have criticised its inclusion in the Warkworth case, University of Queensland's Prof John Quiggin and The Australia Institute's Dr Richard Denniss (Campbell et al. 2012) as well as leading private sector consultants (Deloitte Access Economics 2012).

Water, noise, dust and traffic

Considerable debate exists over the potential impacts of the project on water supplies, air quality, amenity and local traffic. Gillespie Economics ignore these debates in their cost benefit analysis, assuming that there will be no impacts. By ignoring these external costs, the value of the project is overstated, particularly to local residents who will bear the costs associated with any change.

Input-output modelling in Economic Impact Assessment

The use of input-output modelling in section 3 of the socio-economic assessment creates a misleading impression of the impacts of the project. These results are prominently stated in the executive summary, which gives them more weight than the cost benefit analysis:

> *During the construction phase, the Project will contribute to the NSW economy through construction workforce expenditure and equipment purchases. In this phase, the Project will provide the following contributions to the NSW economy:*
>
> - *$1,156 million in direct and indirect output or business turnover;*
> - *$514 million in direct and indirect value added;*
> - *$368 million in direct and indirect household income; and*
> - *1,697 direct and indirect jobs at the peak of construction.*

These are certainly overestimates. Input-output modelling has fallen from favour with economists for many reasons, the main ones being explained by the Australian Bureau of Statistics (ABS 2011):

> ***Lack of supply–side constraints:*** *The most significant limitation of* [input-output modelling] *is the implicit assumption that the economy has no supply–side constraints. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.*
>
> ***Fixed prices****: Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.*

Emphasis on input-output model results is not favoured by NSW Treasury:

> *Model based economic impact assessment [such as IO analysis] is not a substitute for a thorough economic analysis of a policy. The appropriate method for analysing policy alternatives is benefit cost analysis (BCA).* (NSW Treasury 2009, p4)

Decision makers need to understand that the results of input-output modelling are certain to overstate the case for the project and make use of assumptions that may bear little relation to the reality on the ground. This was the strong finding of Preston CJ in the recent Warkworth decision in the NSW Land and Environment Court:

> *There is another, more fundamental issue with the IO analysis. The IO analysis only looks to economic impacts, not environmental or social impacts, and then only to economic impacts measured by reference to goods and services with a market value, not those without a market value. It provides, therefore, some information but only on one set of matters relevant to be considered by the approval authority in determining the project application. The IO analysis is not a substitute for the decision- making process that the approval*

authority must undertake in determining the project application, and the conclusions the IO analysis reaches cannot be substituted for the fact finding, weighting and balancing of all of the relevant environmental, social and economic matters required to be considered by the approval authority. The conclusions the IO analysis reaches on the economic benefits of approving the Project, evaluated for their reliability and given appropriate weight, need to be balanced against all other environmental, social and economic benefits and costs. (Preston 2013) para 463

Conclusion

The economic assessment of the Wallarah 2 Project is not suitable for decision making in its current form. It fails to clearly demonstrate the economic benefits of the project to Australia, much less NSW and the local community. Justification of all assumptions, especially relating to royalties and taxes, is crucial if the public is to have any faith in this assessment. Methodological flaws such as inclusion or reference to social benefits of employment and misleading use of input-output modelling need to be revised before the assessment can inform decision making around this project.

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