APPENDIX F: Review of Economic Impact Assessment (Economists at Large)

Review of Economic Impact Assessment for the China First Project EIS

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Disclaimer:

Contents

Introduction

Background

The proposed China First Coal Project is for an open-cut and underground mine on pastoral land and remnant woodland in the Galilee Basin, Central Queensland. The proposal is for a 20-plus-year mine which will produce up to 40megatonnes of thermal coal per year. The proponent is currently seeking project approval and has prepared an environmental impact statement.

The China First Project is one of several mining proposals in this traditionally pastoral area. The Bimblebox Nature Refuge landholders are concerned that the proposed projects will substantially affect the Bimblebox Nature Refuge, as well as impact on water and the community in the local area. Many communities in Australia are facing similar issues and are concerned that the often-touted benefits of the mining boom may be overstated and/or not accruing to local people.

This submission

The Bimblebox Nature Refuge landholders are making a submission on the China First Coal Project Environmental Impact Statement. As part of their submission they have asked Economists at Large to review the Economic Impact Assessment. In this submission:

Part 1:

We have reviewed all the key findings of the Economic Impact Assessment and have found that there are few unambiguous benefits to this project. The impacts of the project, as identified in the assessment, relate to trade-offs between industries and regions, rather than clear benefits.

No part of the economic assessment supports a claim in the EIS executive summary that the project will lead to "an additional 70,000 indirect jobs". This claim seems to be based on a misunderstanding of a finding of the economic impact assessment and should be immediately corrected.

Part 2:

Part of the reason for this ambiguity about the overall costs and benefits of the project relates to the nature of the assessment – it is based on economic impact assessment, not cost-benefit analysis. The entire economics profession, and the Queensland Department of Infrastructure and Planning, is in agreement that cost-benefit analysis is the best tool for decision making and project assessment.

Another issue to bear in mind throughout our report, is that while this assessment reviews the impacts of the project in isolation, many other large coal projects are being proposed in the same region. This is likely to exacerbate negative impacts associated with skilled labour shortages, exchange rate rises and inequitable distribution of benefits.

These problems are symptomatic of a wider planning issue in Australia: the project assessment process has become the project approvals process. The implicit assumption of this difference is that projects are in the public interest or "good for the economy". As we see here, not only are the benefits of the project ambiguous, but the question of is it in the public interest is not addressed.

We believe this issue is at the core of the public perception that mining projects are lacking a "social licence to operate" in farming areas. Conflicts between farming communities and coal and coal seam gas developments are making headlines regularly, with farmers and the broader community losing confidence that such developments are in the community's best interests. Robust and transparent assessment of this project could help to address this issue.

Review of Key findings of the Economic Impact Assessment

In the executive summary of the Economic Impact Assessment, we are told that "*the China First Project will generate significant positive economic, employment and income impacts at the regional and State levels.*" (p x) This is misleading. The project will have significant economic impacts, some positive and some negative. These positive and negative impacts will not be shared equally. The distributive effects and the net cost or benefit are difficult to gauge from the economic impact assessment. This can be seen in each of the key findings:

> ***Key finding 1.*** *An increase in export revenues of $4.6 billion per annum through the export of 40 Mtpa of high quality thermal coal, representing an increase in Australian thermal coal export revenues of approximately 25.7% and an increase in total Australian exports of 2.0% from 2008/09 levels. The increase in export revenues may provide support for the strength of the Australian dollar.*(px)

An increase in export revenues does not represent an increase in economic welfare. Export revenue is not "free money". When a buyer buys our coal it is not because there is no coal in their country, but because to produce it themselves would require greater inputs of resources to extract it. We too have to put in effort and resources to extract coal, which uses scarce resources that would have been used in other activities. To claim increase in export revenue as the main "positive" economic impact is misleading.

Revenues in excess of costs, profits, do contribute to economic welfare. However what is important is the extent to which these benefits are retained in an economy. This is of great importance to the assessment of a project, as made clear by Eggert (2001) who states that when considering the perspective of local communities "*an analyst must be careful to … eliminate any net benefits that accrue to nonresidents of the community*" (p28). Eggert makes clear that in the case of a national-level assessment: "*a national government would consider profits send abroad as a cost.*" (p27) The ANU's Professor Jeff Bennett agrees, in recent work commissioned by coal company, Aston Resources:

> *Where the shareholders are not citizens, their mine benefits are expatriated and should not be included in the BCA. Careful attention should therefore be given to the register of shareholders and adjustments made to the producer surplus benefit calculation.* (Bennett 2011) (p3)

As mentioned in this key finding, this proposed project, and the many others like it currently before state governments, will strengthen the Australian dollar. This has a deleterious effect on Queensland's other exporting industries, such as tourism, manufacturing and agriculture. Tourism in Queensland has been particularly hard hit by increasing exchange rates, as fewer tourists arrive from overseas and more Australians holiday abroad. Tourism in Australia has shrunk from 3.1% of GDP in 2003-04 to 2.6% in 2009-10 (Richardson & Denniss, 2011).

> ***Key finding 2.*** *An increase in industry output in Queensland of $231.9 million per annum on average during the three year construction period, including an increase in output of $614.5 million per annum on average in the Study Area reflecting a draw of resources from elsewhere in Queensland.*

Industry output is also not an indicator of economic welfare. As stated above, producing output requires inputs, the use of resources that would have been used elsewhere. This is particularly important in this case, as we see that while the study area's output is forecast to rise by $614.5 million, Queensland's output is forecast to increase by only $231.9 million. This expansion takes place at the expense of output elsewhere in Queensland of $382.6 million. A considerable portion of the remainder likely comes at the expense of output elsewhere in Australia. At a national level there may be very little increase in output.

We see on page xiii that this expansion comes at the cost of long-term declines in agriculture and manufacturing industries. The effects of these declines may be greater costs for Queensland communities than are gained by expanding mining output, particularly as mining projects such as China First tend to be serviced by a fly-in-fly-out workforce (see page xviii).

> ***Key finding 3.*** *A $5.2 billion per annum on average boost to industry output in the Queensland economy during the first five years of operation, increasing to an average of $5.7 billion per annum on average thereafter to 2036/37. The majority of this increase in output will be captured by the mine catchment.*

As mentioned above, industry output is not a measure of economic welfare. It is misleading to suggest that any "boost" will be "captured" by the mine catchment. While the output of area may increase, to what extent any benefits accrue to the area is unclear. Benefits will accrue largely to shareholders and mine workers, only some of whom will work in the mine catchment and fewer still will live there. As is made clear in other sections of the assessment, declines in agriculture and small business will occur, making the impact on the economic welfare of the mine catchment difficult to gauge.

> ***Key finding 4.*** *Support and development for local business and industry, through securing local contracts for the supply of goods and services for the project where possible and through other flow-on activities and increased household consumption. Key industries supported by the China First Project include mining, transport and storage, construction and property and business services. A large proportion of goods and services are also anticipated to be sourced from elsewhere in the State, in particular from southeast Queensland.*

Despite being one of the key findings, there is little detail given on how the project will support and develop local business and industry. It is disappointing there is no quantitative assessment of this impact. Later in the report (page 29), only two potential beneficial impacts on local business could be identified, and neither seems convincing:

- *Generating demand for local goods and services.* This seems unlikely given the fly-in-fly-out nature of the workforce. A large proportion of the direct and indirect economic impacts of mining and employment bypass local economies and focus on the larger regional centres.

Such workforces generally get supplies and services from larger metropolitan centres (McHugh, 2009).

- *New rail infrastructure has the potential to assist in easing bottlenecks in the existing rail network....recognised as a common issue by coal companies* [which has a negative] *impact on Queensland's coal export capacity.* While there may be a need for infrastructure improvement in the region is uncertain how this development will assist any industry other than the coal industry. What benefits this development would provide to agriculture or tourism remains unclear, while enhancing export capacity of coal has negative implications to these industries through exchange rate movements and resource crowding out.

> ***Key finding 5.****Increased competition for inputs such as land, labour and capital will result in resources moving to regions and industries that generate the greatest returns. As a result, output from the manufacturing and agricultural industries is estimated to decrease, largely due to increased competition for skilled labour.*

Some of these impacts are quantified in the assessment (page xiii).

Industry	Forecast decline in annual output to 2012-13	Forecast decline in annual output to 2018	Forecast decline in annual output to 2037
Agriculture ($M)	-42.0	-38.0	-15.2
Manufacturing ($M)	-209.3	-1,249.4	-1,050.8

Local residents already understand what this feels like in real terms, as a recent email shows:

> *Was talking to a local grazier a couple of days ago (15mins out of Springsure) who hasn't been able to get an electrician in to fix his pump from the floods at the beginning of the year. He is now organising to fly in an electrician from Brisbane! Similarly Ergon Energy are losing electricians to the mines at an alarming rate and there is talk that they will have to offer much better conditions and pay in order to retain them. The outcome being higher costs to Ergon and hence to us.* (personal communication)

> ***Key finding 6.*** *An increase in employment in Queensland of 2,975 full time equivalent (FTE) employees per annum on average during the three years construction period, including a draw of labour to the Study Area from elsewhere in Queensland and Australia. During the first five years of operation the China First Project is estimated to support an additional 4,464 FTE employment positions per annum on average in Queensland, and approximately 3,954 FTE employment positions per annum on average thereafter.*

> ***Key finding 8.****A decrease in unemployment and the unemployment rate as a result of jobs created by the China First Project, in particular in the project's Study Area.*

As with the earlier discussion of output, Key Finding 6, finding a net increase in employment, disguises the considerable inter-industry trade offs, with job losses in some sectors – again mainly manufacturing and agriculture – and increases in mining-related sectors. Gains in later years seem dependent on increased employment in the public service as a result of increased royalty revenue. The relationship between royalty revenue and public service employment seems unclear and further examination should be made of this assumption than is provided on page 33. Also note that many of these jobs will be provided at the expense of jobs elsewhere in Australia.

Key Finding 8 does not necessarily follow from Key Finding 6. Job increases in the mining sector are likely to be for skilled positions in an already tight end of the labour market. The assumption on page 42 that 50% of jobs will go to people currently unemployed seems arbitrary, with no justification or source in economic literature. It is misleading to suggest that this project will materially affect Queensland's unemployment rate given the lack of substitutability of labour resources.

Note that Key Finding 6 seems to have been misinterpreted in the EIS executive summary, where it is claimed that:

> *A flow through benefit of an additional 70,000 indirect jobs is anticipated, with the majority of these expected to occur in Queensland.* (EIS Executive Summary p17 and repeated verbatim on p72)

The Economic Impact Assessment by AEC Group provides no backing to this claim. It does not mention "indirect jobs" at all. This claim may have been derived from a misinterpretation of table ES.7, where the project is estimated to increase overall employment by 3,954 relative to a no-project scenario for the years 2018/19 to 2036/37. If taken to mean that the mine increases employment cumulatively by 3,954 jobs every year for 18 years, this comes to 71,172 jobs. This is wrong. Table ES.7 is clearly labelled as "Deviation from the Baseline" not "number of unique jobs created per year". The author of the EIS executive summary has misunderstood the economic impact assessment. This error should be corrected immediately as it grossly overstates the employment impacts of the proposal.

> ***Key Finding 7.****Capacity building and skills development in the local labour force through apprenticeships, traineeships and skills training, as well as ongoing skills transfer between imported and local labour and the permanent migration of some skilled labour.*

These benefits could occur if sufficient coercion is applied by governments to the project proponents and other participants in the industry. However there is nothing in the modelling here to suggest that this will be the case, given the acknowledgement that most workers will be fly-in-fly-out. Expanding training and apprenticeships may also place strain on training and education systems that may not exist currently. While this point should be made in the "mitigation/enhancement strategies" urged, it is misleading to place it in the key findings. No quantification of these benefits exists and they will be contingent on good management of the project and wider industry.

> ***Key finding 9.****An increase in household incomes.*

> ***Key finding 10.****Upward pressure on labour prices due to the increase in demand for skilled labour, particularly in industries experiencing skills shortages, further increasing household incomes. This increase is expected to be over and above any increases in the costs of living, representing an increase in real wages.*

Increases in household incomes will also not be distributed equally. This increase will be primarily felt by mine employees and those in related industries, while people in other industries may experience a decline. The assessment acknowledges that the mining boom has led to a "wealth divide between mining families and other residents (page xxii)" and provide no suggestion that this project will change this.

There is little examination of costs of living in the assessment, other than declining housing affordability. There is no discussion of food, fuel, clothing or other consumer prices in comparison to wage rates and this finding seems to be based on assumption rather than analysis.

> ***Key finding 11.****An increase in*
>
> - *Queensland Government revenues of approximately $364.9 million, primarily in the form of approximately $343 million per annum in royalty payments; and*
> - *Australian Government revenues of approximately $709.8 million, primarily through avenues such as company tax (approximately $302.9 million), personal income tax (approximately $237.8 million) and goods and services tax (approximately $158.3 million).*

As with discussion of other revenues and outputs earlier, revenues to governments here are not a measure of benefit. This finding overlooks the fact that substantial subsidies are paid by governments to mining companies. While it is beyond the scope of this review to identify these in the case of the China First Project, common subsidies and tax breaks include:

- Direct subsidies
- tax holidays or concessional treatment with respect to payroll tax, rates and other taxes and levies
- in-kind assistance through the provision of cheap or free water and power
- Tax deductibility of research and exploration expenses
- Fuel rebates

(see (Richardson & Denniss, 2011)

> ***Key finding 12.****Development of rail and port infrastructure, as well as local road infrastructure, an airstrip and utilities infrastructure to support the project. This will provide benefits to the entire study area by providing a link between the abundant resources in the*

Galilee Basin and export infrastructure, assisting in commercialising these resources. This infrastructure will also improve regional business capacity and competitiveness, and will provide positive legacy benefits for the region.

This finding raises three points already mentioned:

- It is difficult to identify how this infrastructure will be of benefit to the community and other industries. Developing infrastructure primarily for use by the coal industry may not provide infrastructure options with the widest economic benefit. This and other mining projects place major strain on existing road and rail infrastructure to the detriment of other users.
- Much of this infrastructure development may be subsidised by tax and ratepayers. The lack of quantification here suggests these benefits are again assumed rather than stemming from deeper analysis.
- As mentioned several times, maximising exports is not the same as maximising economic welfare. Decision makers should not be mislead by this confusion of “benefits” and “exports”.

Lack of Cost-Benefit Analysis

The economic assessment of the China First project is based on computable general equilibrium analysis, with no cost-benefit analysis. To assess if the project is in the interests of the state and local communities, the assessment must be revised to include cost benefit analysis. While cost-benefit analysis is not explicitly required of the assessment, section 5.2 of the Terms of Reference for the project require the environmental impact statement (EIS) to:

> *provide a comparative analysis of how the project conforms to the objectives for 'sustainable development'–see the National Strategy for Ecologically Sustainable Development (1992)…This analysis should consider the cumulative impacts (both beneficial and adverse) of the project from a life-of-project perspective, taking into consideration the scale, intensity, duration and frequency of the impacts to demonstrate a balance between environmental integrity, social development and economic development.*

In other words the EIS should assess all the positives and negatives of the whole project in a way that shows whether the project will provide a net benefit to the state.

However, the Economic Assessment provides no analysis that can assist with this decision as it is based on impact assessment not cost-benefit analysis. This is clearly against the recommendations of the Department of Infrastructure and Planning's Project Assurance Framework, which states:

> *The primary method of economic evaluation of public sector policies and projects is cost- benefit analysis.* (Qld DIP 2011,p18)

The evaluation of mining projects with private sector involvement is no different, as is made clear by Eggert (2001):

> *Summing up, a benefit-cost framework for assessing the effects of a mining project is useful, even essential, for evaluating the impact of a mining project on the economic development of a local community or region. Such a framework focuses our attention on a number of critical issues: What is the overall effect of a project? What are the costs, and are the parties bearing the costs being compensated? What are the net benefits and how are they distributed?*

Virtually the entire economics profession agrees that cost-benefit analysis is essential for project assessment, see for example (Abelson, 2011; Dobes & Bennett, 2009; Ergas, 2009) and many others. In other states, cost-benefit analysis would be required for such a project; the NSW Department of Planning's Environmental Assessment Requirements require:

> *A detailed assessment of the costs and benefits of the Project as a whole, and whether it would result in a net benefit for the NSW community*(DoP NSW, quoted in the economic assessment of the Maules Creek Coal Project, (Gillespie Economics 2011, p4).

It is important to understand the difference between cost benefit and economic impact analysis. As the Queensland Department of Infrastructure and Planning explains:

> [Cost-benefit analysis should] *comprehensively identify and estimate as many costs and benefits of a project as can reasonably be measured, including those which can be thought of as social and environmental,* [in order]*to rank project options according to their net economic benefit.*(p18)

Whereas economic impact assessment:

> *typically measures the impact of a project on the volume of economic activity in a region (e.g. on gross domestic product or employment),*(Qld DIP 2011, p23)

The NSW Treasury confirms these interpretations:

> *Model based economic impact assessment 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)

To understand if the China First project is in the interests of the Queensland and local communities it is essential that economic analysis be based on thorough cost-benefit analysis, including consideration of social and environmental, in accordance with the Department of Infrastructure and Planning guidelines before further consideration is given to this project.

Conclusion

The China First Coal project will have impacts on the local and Queensland economies. Some of these impacts will be beneficial, while others will reduce the economic welfare of stakeholders. As the Economic Impact Assessment is focused on measures of impact, such as industry output, export revenues, labour demand, it does not provide an understanding of if the project's benefits outweigh its costs, nor of how any costs and benefits are distributed. What is certain is that participants in the mining industry – investors, employees – will benefit, while non-mining stakeholders, including the agricultural and manufacturing industries will face higher costs and difficulties related to a strong exchange rate. These factors will be exacerbated if similar large projects proposed for the region are approved.

What is needed is cost-benefit analysis, which would allow for a decision to be made in the Queensland public interest. This is the approach preferred by economists and the Queensland Department of Infrastructure and Planning.

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