



**Australian Government**

**Department of the Environment and Water Resources**

POLICY DEVELOPMENT BRANCH

## MINUTE

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**Approvals and Wildlife Division**

**GUNNS' PULP MILL**

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Thank you for passing on the material concerning the above referral for assessment under s136(1)(b) of the EPBC Act which calls for economic and social aspects to be considered.

The following analysis examines the publicly available information concerning economic aspects of the Gunns' proposal to develop a pulp mill at Bell Bay in the Tamar Valley region of Tasmania. The purpose of the analysis is to provide some guidance and assessment on the reliability and credibility of the information provided to date. The analysis then proceeds to discuss some of the issues that would impact the findings presented by Gunns' economic modelling if various information inputs and assumptions vary resulting in different final outcomes on the measures claimed.

The primary source of material provided to the impact assessment process to assess the economic impact at Australian, Tasmanian and regional level was through a project undertaken by John Stanford while initially with the Allen Consulting Group and then Insight Economics. This project used a Computable General Equilibrium (CGE) model to estimate the likely impacts on the levels of economic activity at the various aggregated economic regions indicated above. The CGE model used in this project is the Monash Multi-Regional Forecasting (MMRF-Green) model. This is widely accepted as a credible model for examining the types of major project development initiatives that the pulp mill represents. However, there are a number of issues concerning all CGE models and the MMRF-Green in particular that could impact on the reliability of the results presented.

At a general level CGE models involve the construction of a model to represent the actual economy and the sectors involved in the economic activity of that economy. The resulting model is constituted by a complex set of algorithms and datasets that need to be solved following what is defined as a ‘shock’ to determine the resulting outcomes on the various sectors or regions within the economy. In this case the ‘shock’ is the investment by Gunns Ltd in the pulp mill at Bell Bay. However, while the model attempts to include all aspects of the economy it is still only a model and does not completely replicate all activities occurring in the actual economy. In addition, the outcomes of the model are only as good as assumptions and data entered that relate to the abovementioned ‘shock’. The MMRF-Green model also has particular issues that may be relevant to the outcomes derived in this study. The model is not considered to be strong on its ability to incorporate the effects of international pricing and demand for products. In this case it will have been necessary for assumptions on pulp pricing and demand to be entered exogenously ie pre-determined prior to the model runs. While reputable consultants (Jaakko Poyry) were used to develop these assumptions, the actual data are commercial-in-confidence and hence no judgement can be made on their accuracy, particularly regarding the long-term. Of course, this does not present a problem if the only investment in the project is privately sourced. However, as discussed below, it may be an issue if public funding is allocated to the project.

A similar issue relates to the claimed overall impacts of the project over the period to 2030. The marginal increases in GDP and employment are quite small when considered against existing levels for both indicators. A 2.5% GDP increase in NPV terms for the period could very easily change with various inputs changing. For example, the model and resulting data are presented using a real social discount rate of 5%. It would be useful if other discount rates were used to present a sensitivity analysis of the overall results. Varying other factors that enter the model exogenously could also provide illuminating information regarding the robustness of the project outcomes to changes in wider economic conditions. However, again, the above noted caveat applies that if the project is fully funded from private sources then there is limited public risk.

Another area where CGE models fail to provide a complete picture of the outcomes from an investment ‘shock’ is where non-priced externalities occur. In this case an example of where such externalities may occur is if an environmental impact (or even a perceived environmental impact) may have an economic impact on other sectors of the economy (particularly the regional economy). For example, if tourism forms a significant component of the regional economy and part of the attraction to the area is based on the quality of local environment then the potential for degradation of that environment could ultimately be reflected in tourism sector activity. CGE models are unable, currently, to take account of such effects. As a result, the impacts presented by Gunns do not measure nor take account of such impacts that can not be immediately identified as potentially impacting on the total effect of the investment. This situation may have arisen because the assessment has been undertaken on the basis that there will be no negative upstream or downstream environmental impacts which, in turn, could result in a reduction of the claimed economic benefits. This observation is supported by the economic assessment report which does not recognise that such a case has been assessed nor considered. However, further economic assessment would be required to estimate the quantum of such upstream/downstream impacts if various environmental impacts are identified. This could be undertaken within a qualitative or quantitative framework to provide a broader presentation of the overall economic impacts of the project.

The consultants indicate that additional employment during the construction and operational phases of the project will primarily be drawn from Tasmania (80%) and all will be accommodated locally as required. While the CGE model should be capable of reflecting the current status of the labour force and the associated pricing parameters in the labour force market there are a number of assumptions made by the consultants that may not come to pass. For example, they claim that should increased payments to labour be required then other projects in other regions will have later starting dates. However, a countervailing scenario could be that, if due to either cost constraints or lack of suitably qualified labour in the local/regional/State area, then this project may be the one to be delayed. In turn, this may have an effect on the claimed economic impacts, particularly the timing of such benefits.

Another area of general concern relates to the potential for direct and indirect levels of public funding associated with the project. Direct funding would involve allocations of funds on the basis of development goals etc while indirect public funding could include, for example, provision of infrastructure only used by the project through to training of labour to a certain skill level required to construct and operate the mill.

The impact of such support can have an impact at two levels – impacts on wider economic activity and risk. Firstly, the provision of public funds to this particular project has the potential to result in an overall inefficient outcome for the State and national economies. This can occur when, as is currently the case, a state of low unemployment and high capital mobility and availability exists which means that should public funds be allocated to sub-optimal projects then a deadweight loss will occur in the Australian economy. A further clear example of how this may currently be the case in Tasmania is the fact that unemployment has fallen from 6.8% in April 2004 to 5.4% in April 2007. As a result it is likely that available skilled labour has already entered the labour market as and where required.

The second area concerns risk. If the private rate of return on the project is currently marginal and only the addition of public funding will ensure its commencement there is a risk that should any one of a number of external parameters change significantly then the public funds will be put at risk. These parameters could include a change in the costs associated with inputs associated with the construction of the mill eg labour, construction materials or output factors such as the price and demand for pulp changing due, for example, to competing pulp mills being established in other countries.

Another area of concern relates to the claims associated with the proposal to develop a chemical manufacturing facility to supply various compounds to the Mill. It is claimed that this facility will have excess capacity to the immediate requirements of the Mill and will enable other regional/State businesses to purchase compounds at a reduced rate compared to current imported stocks. However, while the model shows the impacts/benefits based on this assumption there will be a question over whether such discounted supplies would continue if profit margins at the Mill were pressured due to, for example, a decline in the price of bulk pulp. In this situation there would be a

propensity for the chemical facility to begin charging at rates slightly below imported supplies, thus maintaining market share but improving only profits.

In conclusion, the analysis as it is presented is reasonable on the basis of the model used, the publicly available assumptions and data used. The above comments indicate a number of areas of potential concern regarding the robustness of the results as well as potential risks if significant public funding is used to support the project. In addition, if it is assessed that there will be upstream and/or downstream environmental impacts that may affect other industry sectors then further economic analysis would be required to present a broader assessment of the overall economic impact of the project.

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