

Submission

NSW Treasury

Draft guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals

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Introduction

NSW Irrigators' Council (NSWIC) represents more than 12,000 irrigation farmers across NSW. These irrigators access regulated, unregulated and groundwater systems. Our Members include valley water user associations, food and fibre groups, irrigation corporations and community groups from the rice, cotton, dairy and horticulture industries.

This submission represents the view of the Members of NSWIC with respect to NSW Treasury's *Draft guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals*. However each Member reserves the right to independent policy on issues that directly relate to their areas of operation, or expertise, or any other issues that they may deem relevant.

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General Comments

NSWIC welcomes the opportunity to provide a submission to NSW Treasury on the draft guidelines for the use of a Cost Benefit Analysis (CBA) associated with mining and coal seam gas proposals (CSG).

NSWIC recognises the value and importance of such an evaluation tool that will allow for a comprehensive assessment of the aggregated social, environmental and economic impacts of mining or CSG activities. However, NSWIC is mindful that an optimal calibration of the CBA guideline is crucial to determine the precise net present value which will inform further mining and CSG activities.

NSWIC's primary concern lies with the protection of the state's water resources - both ground and surface - as it is a vital input factor for irrigated agricultural production. After careful analysis of the draft guidelines, NSWIC is of the opinion that insufficient consideration is given to the long term impacts on water resources. Without a detailed assessment of the impact of mining and CSG activities, water resources in NSW will continue to be at risk from possibly irreversible damages.

We have always supported an optimal balance between the preservation of NSW's agricultural production and the extraction of the state's coal and CSG reserves. Given the absence of explicit regulatory requirements imposed on mining and CSG operations through the Aquifer Interference Policy, NSWIC is concerned that the state's water resources and the productive capacity of industries dependent on them will be continuously be threatened by future mining and CSG activities.

We continue to advocate a 'no regrets approach' to mining and CSG activities and as such it is our strong recommendation that all mining and CSG proposals should be required to submit a comprehensive CBA before applying for a gateway certificate as it will allow for a first assessment of the social, environmental and economic impacts of mining and CSG activities.

Specific Comments

Optional Cost Benefit Analysis

Given the absence of regulatory scrutiny under the *Aquifer Interference Policy*, NSWIC had hoped that the proposed guidelines for the use of Cost Benefit Analysis would provide for an alternative assessment tool that comprehensively evaluates the impacts of mining and CSG activities on water resources. Since the CBA is optional and only conducted after the granting of a gateway certificate, NSWIC questions the usefulness of this assessment.

Since the assessment and advice given by the independent Mining and Coal Seam Gas Gateway Panel will determine if a mining or CSG proposal is able to lodge a development application (DA), NSWIC considers it vital that a comprehensive CBA is made mandatory for all mining and CSG proposals prior to the Gateway Panel's decision.

This need for a comprehensive CBA is supported by the guideline itself which outlines the benefits of a CBA;

Cost benefit analysis is a comprehensive form of evaluation. It assesses the economic, social and environmental impacts based on well-developed, objective and democratic principles of valuation, and provides transparent and testable results that are open to empirical validation¹.

While the full impact of mining and CSG activities in NSW are yet to be fully understood, NSWIC considers it absolutely vital that mining and CSG developments are required to conduct a comprehensive CBA that would provide some form of assurance that the consequences of their activities will not have a detrimental impact on both land and water resources in the state.

In this context, NSWIC emphasizes that the criteria in the CBA guidelines need to be optimally calibrated to ensure that all relevant costs and benefits are taken into considerations. Given the inherent uncertainties, lack of available data sources, and difficulties in assessing the distribution of impacts, the CBA guidelines needs to be inclusive and detailed. In its current form, the guidelines do not provide for such a detailed assessment and hence will only be of limited benefit for the assessment.

Furthermore, without detailed guidelines and the fact that the CBA is not a mandatory requirement, NSWIC is concerned that the purpose and intent of the CBA could be diluted or distorted to a point where it could be used as a powerful tool to justify further mining and CSG activities even if the impacts in some instances would not justify further activities.

¹ Guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals, p.1

Impact on Water Resources

While the CBA guidelines make reference to the potential impacts on water resources, NSWIC does not concur with the assessment that those impacts are indirect. Any mining or CSG activity can have a direct and potentially detrimental impact on water resources - both ground and surface water- which need to be recognised and quantified appropriately in the CBA.

Furthermore, in the case that a mining or CSG activity could irreversibly damage water course and/or aquifers in NSW, then these impacts should be regarded as unacceptable and the CBA should reject a proposal on the grounds that the consequences of further mining and CSG are too severe.

Additionally, NSWIC considers the references made to water resources in the CBA guidelines as being insufficient to provide mining or CSG proposals with enough details to assess in full the impacts on this vital agricultural input factor. As NSWIC has highlighted in its submission to the *Aquifer Interference Policy*, the protection of water resources - both ground and surface - need to be absolute and unconditional. As the current Aquifer Interference Policy is not a legislative instrument, NSWIC is not convinced that it provides sufficient protection for the state's ground and surface water resources. For this particular reason, NSWIC considers it necessary that the CBA guidelines are extended to include a comprehensive list of possible impacts on both ground and surface water resources that would need to be assessed as part of any commissioned CBA.

The guidelines also highlight the uncertainties and difficulties in accurately assessing the costs and benefits associated with mining and CSG activities. Given the limited information available, NSWIC considers it important that a 'no regrets' approach is being taken. Should water courses and/or aquifers be damaged as a result of mining or CSG activities, these damages might be irreversible and will therefore have a long term impact on all communities, the environment and industries dependent on them.

NSWIC is also deeply concerned that the Planning and Assessment Commission (PAC) is given the sole discretion to determine the net social welfare implications of any mining or CSG activity. In that respect, NSWIC strongly disagrees that a decision about the net social welfare implications could be made in the absence of comprehensive information being available as outlined here;

However if there is a high level of uncertainty about some variables, the PAC will either seek additional information within a reasonable timeframe or determine the project based on the information available².

NSWIC disagrees with the notion that a decision should be made by the PAC if the information available is incomplete or inherent risks and uncertainties remain.

² Guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals, p.4

Components of the CBA

- **Scope**

While the initial paragraphs of the guidelines suggest that a CBA is a comprehensive form of evaluation that addresses social, environmental and economic impacts, NSWIC is concerned that further in the document, a reference is made only to 'significant impacts' being assessed as part of the optional CBA;

In estimating these benefits and costs, there is the practical principle of materiality - costs and benefits that will not have a material bearing on the decision do not need to be included in a CBA³.

Given that most of the impacts are uncertain and information on water resources in particular is scarce, NSWIC questions how benefits and costs are evaluated and which factors will be considered to have immaterial impacts on the overall net value of major projects. In order to be a comprehensive assessment tool, NSWIC regards it as necessary that all impacts (both benefits and costs) are thoroughly evaluated and considered for the CBA.

- **Estimating costs and benefits**

As the guidelines have correctly identified, the valuation of certain costs and benefits, specifically with respect to environmental impacts and the change in an industry mix between agriculture and mining, is a complex task, and as such NSWIC would like to reiterate its strong preference for a 'no regrets approach' to mining and CSG activities.

- **Timeframe**

NSWIC does not concur with the suggestion that a maximum 50 year timeframe should be considered for the CBA. The extraction of minerals or CSG is by definition a finite and short term process that cannot easily be compared to the long term production capacity of agriculture. It should be highlighted at this point that, if correctly managed, agriculture could provide for an indefinite provision for food and fibre in NSW. As such, the CBA should recognise the different productive timeframes involved and acknowledge that, in case mining or CSG activities have a long term impact on agricultural productivity, then these costs have to be quantified and included into the CBA results.

- **Risk and Uncertainty**

NSWIC is concerned about the following statement made in the CBA guidelines;

Most forecasts of costs and benefits are to some extent uncertain. Sometimes, some impacts cannot be reliably forecast or valued⁴.

As the impacts on water resources are still not fully understood and the data is limited, NSWIC is concerned that the uncertainties inherent in the CBA could cause significantly biased results.

³ Guideline for the use of Cost Benefit Analysis in mining and coal seam gas proposals, p.5

⁴ Ibid. p.6

As mentioned earlier, NSWIC considers it inadequate that the PAC is given the sole discretion about assessing a project. To avoid any biased results, NSWIC suggests that threshold values should be incorporated into the CBA guidelines that outline the minimum amount of verifiable information that needs to be available for the PAC to make a decision over the welfare impacts of mining or CSG activities.

- **Discount rate**

While NSWIC agrees that benefits and costs need to be compared using the same discount rate, we do not concur that a generic discount rate of 7% should be used for a CBA.

Given that market conditions vary constantly, a discount rate of 7% might not be appropriate and hence a formulaic approach should be used instead to determine an appropriate discount rate for the analysis.

- **Unquantified factors**

Any conducted CBA should specifically outline the limitations of the analysis and provide further details on how unpriced or unquantified factors were treated as part of the assessment. If most of the factors are unquantifiable or their value is uncertain, then the CBA should clearly state that the results need to be evaluated with caution.

NSWIC acknowledges that environmental benefits are inherently difficult to measure as markets for these rarely exist. However given these uncertainties, NSWIC reiterates the importance of a 'no regrets approach' to mining and CSG activities.

Methodology of Cost Benefit Analysis

As outlined previously, given the inherent uncertainties and the difficulties in assessing the social, environmental and economic impacts of mining and CSG activities, NSWIC reiterates its concern about the lack of detail in the current CBA guidelines.

Furthermore, as Annexure 3 outlines, there are varying evaluation techniques used for a CBA. While the guidelines highlight some of the drawbacks of these approaches, NSWIC considers it important that those limitations are being highlighted in the individually commissioned CBA.

In particular, non-use value estimations are even less reliable than use value techniques as they depend on survey data and scenario analysis. The techniques are imprecise, both in terms of their ability to deliver reliable data and to provide correct survey results. Furthermore, survey data has an inherent response bias since only those individuals who feel strongly about a topic will answer the questionnaires.

ENDS.