

Select Committee on Unconventional Gas Mining

Introduction

Please accept this as a submission to the above Senate Inquiry. My name is Jeffrey Kite and I live at 1248 Thunderbolts Way, Bowman (Gloucester), NSW. I am a retired Water Resources Engineer, having spent 25 years working for the Western Australian Government mostly the water resources management agency, but also with the water utility, between 1975 and 2000.

I have lived in Gloucester for the past 10 years. I am an active member of Groundswell Gloucester and provided much of the technical support for the Group's opposition to the Gloucester Gas Project, particularly on water issues. I am also president of the Gloucester Environment Group. However, I make this submission as a resident of Gloucester.

I have lived in Gloucester during the main period over which AGL received conditional approval from both State and Federal Governments and the company carried out its exploration programme for coal seam gas. So I make this submission effectively using the AGL Gloucester Gas Project (GGP) as a 'case study'.

There is a huge amount of information that I consider relevant to the Select Committee. However I will briefly describe some of the factors that led to a failure of the Environmental Impact Assessment processes as applied to the GGP, associated lack of community consultation and a few major problems during this process which should have indicated that the project was most likely not viable.

AGL Gloucester Gas Project Approvals

The project received conditional approval by the State Government in February 2011 and the Federal Government in November 2013. It is my view that neither Government should have approved this project considering the complete lack of key information provided by the proponent in its original Environmental Assessment (EA) document.

I don't wish to get into the politics, however as I understand it, the State Government approval for the GGP was suddenly given about a week before the previous State Labour Government went into caretaker mode prior to the State election. The reason for its haste in doing this is still unexplained.

The Federal Government approval was given around the same time that AGL was publicising its great concern about the constraints which were being applied that would make the planned expansion of the Camden CSG development extremely difficult. As I understand it, there were no additional opportunities for community involvement provided for by the Federal Government. Hon Minister Tony Burke, in his media conference to announce conditional approval, stated something to the effect that this approval is different to other Federal approvals under its environmental legislation because there are so many strict conditions that still need to be met by AGL in relation to groundwater modelling and other areas. Once prompted, he agreed that it could be considered a 'Clayton's approval'. So why did the Federal Government approve this project in a way that was not normal practice?

When the quality of information about fracking and other critical water issues including the disposal of waste products, that was provided by AGL in its EA document dated November 2009, are considered, it is difficult to understand how **any** approval could have been granted. Add to this the fact that after the public submission period for the original EA was completed in 2010, and there was no further formal (legislative) opportunity for any community involvement, it can be seen that the process was unjust. These are enormous flaw in both State and Federal Environmental Impact Assessment (EIA) processes

Was the GGP ever going to be a viable project?

The previous owner of PEL 285, Lucas Molopo (LM), had purchased the Exploration Lease in 2002 with plans to develop CSG resources. LM did little exploration work before 2007. In the Chairman's address at the 2007 AGM on 23 November, his comments included that: ".....the monies we are spending this year on coal seam gas, most particularly at Gloucester Basin, is indicative of the high priority we now place on this area. Part of the Group's recapitalisation in June 2007 was made to provide additional capital for this project." There seemed to be an air of confidence at LM that they were heading down the right path. The Stratford Production Pilot (SPP) commenced in 2007 and at this stage included six wells. Three wells were drilled, failed and abandoned before the final wells could be fracked. Of its other 10 exploration wells drilled in 2007/08, it would seem that eight wells were ultimately abandoned; of which at least five failed due to 'stability' problems, according to LM's ASX announcements.

In terms of the usefulness of the data from the Stratford Production Pilot, only 'stages' of the wells were fracked rather than individual coal seams. This would seem a relatively 'coarse' way of gaining estimates of gas and water production when compared to the nine coal seams AGL fracked on WK13.

Lucas then announced to the ASX on 25/02/08 that LM had received 'Initial Reserves Certification' through a named 'independent certification' company, showing 525.4 billion standard cubic feet of potential recoverable gas. However only 3% of that volume was in the 'Proved' category and the other 96% were in either the 'Probable', mostly 'Possible' or 'Contingent' categories. One might question how the company can come up with such precise volumes.

During 2008, LM did very little drilling. They completed one well in June (commenced in 2007), then seemed in a rush to complete two more wells in late December 2008 just before the project was sold to AGL. At some stage in late 2008, LM put the project on the market. This raises the question of whether Molopo and Lucas, the latter a very experienced drilling company, may have realised that their problems with drilling stable wells could be the result of the very high level of geological complexity and the project was not worth the risk. Their initial reserves certification gave them an opportunity to offload the project.

Then, in its report to the ASX for the six months to 31/12/2008, dated 19/02/2009, Lucas announced that it had "sold its investment in Gloucester Basin during December 2008 for \$259 million realising a profit of \$218 million before tax." The report goes on to say that "Management considered that, having regard to developments in the market place, it was a prudent time to exit as this asset moved into the production stage, when significant development expenditure would have been required." The 2009 Annual Report states that the

Gloucester PEL was sold with the "...gross sale proceeds of \$259 million realising a net profit after tax of 154.8 million."

In spite of the limitations and risks, AGL apparently considered that they had enough information to make the purchase, realising a massive profit for LM.

As already indicated, the Environmental Assessment document submitted by AGL in November 2009 was totally inadequate and should never have been approved for release by the Government. The critical areas of fracking, protection of groundwater and surface water and associated ecosystems as well as disposal of waste products, were mentioned more in passing rather than evaluating possible problems and providing the necessary knowledge that could be used for proper assessment. It is farcical that the Government could have accepted the Environmental Assessment as a document suitable for its Part 3A assessment process.

In some areas, such as fracking, the only reason there were some related conditions in the approval was because the PAC went away and looked at problems and issues associated with this fundamental process. The PAC should not have been required to do this. It is the proponent's responsibility to provide the relevant information. As it had not been supplied, the Government should have gone back to the proponent and sought an addendum. There was enough information available in 2010/11 (when the Government was doing their assessment) for the proponent to have provided more evaluation on fracking which had already been identified as a critical issue for CSG production in other countries.

Potential problems associated with fracking and other potential impacts on groundwater and surface water systems, such as the extraction of huge quantities of groundwater ('produced water') are magnified by the extremely complex hydrogeology of the Gloucester Basin. The complexity of the geology in this basin was known by Government as early as 1991 when a report by the Geological Survey in NSW identified that routine mining of coal to relatively shallow depths was likely to be very difficult.

I believe that the complexity of the hydrogeology is one of the main reasons why Lucas Molopo were very happy to sell this exploration licence at a considerable profit.

Ultimately, it is likely that the major complexity of the hydrogeology was the main driving force for AGL to realise that the project was not viable. The design of the Waukivory Pilot Project was also fundamentally flawed, as even though AGL was expecting to be able to frack as shallow as 250m, the shallowest frack was at 370m. I believe that AGL was too nervous to frack and flow test at depths less than 370m, even though the company had repeatedly said that it would access coal seams from as shallow as 200m, because it was concerned about the potential for surface interactions with fracking fluids and/or groundwater drawdown. Therefore the quantities of gas coming from even the best of the Waukivory wells was greatly reduced from what might have been needed for a viable project.

Groundswell Gloucester was continually pushing the issue of connectivity as a key issue, but AGL always just stated that there was no connectivity and the Government did not take any notice of independent scientists and engineers who were also very concerned about this issue.

The State and Federal Governments and AGL's main hydrological consultants continued to encourage AGL to pursue the project, even though there was great uncertainty about likely impacts and whether there would be viable gas flows.

Depending on which source of information you can believe, AGL has spent somewhere between \$500 million and \$1.2 billion on this project. The amount spent by the State and

Federal Governments would also be huge. This is a massive amount of money to have been wasted when, if early indications of major uncertainty about the viability of the GGP were properly considered, the project would have been rejected and the money could have been used in the further development of renewable sources of energy.

This would have also avoided much of the incredible stress and divisiveness that AGL and the State and Federal Governments have caused to the people of Gloucester and surrounding areas. But it would seem that neither AGL nor the State and Federal Governments had any real understanding or for that matter, did not seem to care about the levels of stress the GGP project caused the people of Gloucester.

Summary of Water Related Issues

For the interest of the Select Committee, I have attached a copy of a powerpoint presentation I provided to the CEO of AGL at a meeting with Groundswell Gloucester in August 2015. It gives a useful summary of the situation as Groundswell Gloucester saw it, at the time.

Final Comment

This is a very brief account of some of the huge problems which have occurred due to the failure of both Governments' EIA processes and the lack of opportunities for community involvement for the Gloucester Gas Project. I would appreciate the opportunity to provide further information to the Select Committee at one of the hearings where I feel sure I could provide additional information of interest.

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