Dear Sir/Madam,

I am making a submission in relation to Kepco Bylong Coal Project, application number SSD 14_6367.

I **strongly object** to the proposal to develop a large scale open cut coal mine is this area. My family own a property in the Bylong Valley which is used for beef cattle production and we rely on groundwater for the property.

My primary ground for objection is the mine's impact on groundwater. The EIS's analysis of groundwater impacts obfuscates and underplays the likely real impacts of this proposal. It is noted that the Gateway Panel for the project stated that '*Significant impacts are anticipated on highly productive groundwater*' – EIS page 199. Whilst section 7 of the EIS purports to address major concerns raised by the Gateway Panel, the analysis leaves much to be desired. Basically the EIS proposes a water management plan that involves a program of monitoring to validate the predictions of the EIS. In all reality, and based of other coal mines in the Hunter Valley, the mine will result in the **long term drawdown of aquifers** particularly during the post-mine closure period. Based on other Hunter Valley coal mine projects, the open cut component of the mine will basically fill up with water over time as the mine pit acts like an evaporation pit. This will result in a permanent drop in the water table. The pit water will become extremely saline over time and the land will be permanently degraded. The EIS fails to address this issue. On this basis, the proposal should be **rejected** as these impacts will be significant, extremely damaging and enduring. The short term benefits of coal extraction – benefits that largely will be felt by Kepco and their shareholders – will be far outweighed by the permanent damage to this productive agricultural land and magnificent natural landscape.

I note that on page 211 of the EIS – peer review – it is suggested that 'A very thorough analysis of the uncertainty in the estimates has been conducted'. This statement is completely unfounded. In light of the above shortcomings in the EIS, it would suggest that the groundwater impacts of the EIS have been prepared in a way that are designed to completely underestimate and disguise the real impacts on groundwater.

The Independent Expert Scientific Committee (IESC) signalled the potential impacts to the alluvial systems porosity and permeability, and consequential implications for long term flow and storage resulting from the predicted alluvial drawdown (Appendix A, page 6). The proponent has confirmed this has not been addressed. This should trigger the application of the precautionary principle – specifically this proposal should be **rejected**.

I also note that it is proposed that excess water be stored in the unlined Eastern Open Cut mine pit totalling up to 2,542 ML at the end of mining. Some reinjection of waste water to the underground mine workings has been proposed, however the volume is not reported. There has been no field investigation to support sustainable reinjection volumes and explore water quality impacts. The reinjection of mine waste water will require approval from the Department of Primary Industries, Water. No such evidence of the approvals is included in the Assessment. In addition it is unclear what will happen to the remainder of the waste water not reinjected. Overall the provisions for mine water management are unsatisfactory and not supported by field assessments.

Open cut versus underground

The EIS's claim that the financial viability of the mine depends on establishing an open cut mine to operate for the first 10 years is poorly justified. Whilst the economics of the proposal are being based on an analysis of the Bylong project as a stand-alone project, the justification for an

underground mine is tenuous. The majority of the coal resource to be extracted will be extracted from the underground workings – the EIS should justify why the open cut is essential, noting that the coal is to used by Kepco to burn in their own coal fired power stations in Korea. By eliminating the open cut option, it would significantly reduce the major environmental impacts of the proposal – impacts which will destroy significant parts of the magnificent Bylong and lee Creek Valleys. While impacts on the ground water aquifers will remain, at least there will be much reduced impacts - particularly visual impacts on the landscape which are again extremely understated in the EIS. The visual impact component to the EIS should be carefully reviewed because it appears to significantly under-estimate the real impacts, based on a recent trip I took through Ulan.

Water supply

The water impact analysis in the EIS is sub-standard and should be independently peer reviewed by credible scientific experts. Notably, the reliance on up to 31 bores to supply water for the operation is unsustainable. The impacts on the aquifer from this extraction are not quantified with any level of certainty. For example there appears to be no contingency plan should the bores not deliver the required water. Based on my family property experience which we have owned for more than 50 years, the area is very drought prone. During inevitable droughts, will water be extracted from the Goulburn River or Bylong River? Can the flows of these small streams sustainably cope with such an industrial scale water extraction operation? I note that there is yet to be a water sharing plan for the Bylong catchment – therefore it is very unclear how alternative sources of water could be obtained by the mine.

The impacts on the Bylong and Lee Creek valleys from the water extraction are not quantified. If this proposal is granted approval, will there be any monitoring of the aquifers in the Bylong and Lee Creek valleys?

Save Lee Creek Road from upgrade or closure

Section 3.14.4 outlines options for maintaining a 'reasonable level of access to the Bylong Valley Way'. One option is an upgrade of Lee Creek Road. I object to any proposal by Kepco to 'upgrade' Lee Creek road – this road is fine just as it is and should not be upgraded to allow faster traffic movements. This would diminish the road's appeal to locals especially cyclists. I note that I am one of the relatively few lucky cyclists to have enjoyed the magnificent Lee Creek and Upper Bylong Roads. These two roads wind through a beautiful valley, through undulating (and highly productive) rural grazing properties and below wonderful sandstone escarpments. I cycle with my young kids along these roads regularly – in any other part of the world they would probably be major tourist attractions. The EIS refers to consultation with 'all three relevant landowners (page 77) – can this please be expanded to include others such as myself who use Lee Creek Road for recreation purposes etc?

Additionally Kepco should never be granted permission to close (the public) Lee Creek Road to the public and their justification for doing so is weak given they have good alternative access to Bylong Valley Way. Their proposed destruction of the Upper Bylong Road is bad enough.

Biodiversity offset strategy

The biodiversity offset strategy outlined in the EIS will deliver **no net benefits** for fauna or flora protection because the areas set aside to be protected are extremely unlikely to be ever subject to development anyway. So where is the net benefit? The mine will have significant impacts on White Box – Yellow box – Blakely's Red gum Grassy Woodland – these impacts are clearly obvious – and yet

the biodiversity offset strategy is proposed as a means of addressing these impacts. Well, it won't work. The offset areas will not be developed – noting the local land use which is primarily agricultural and natural bushland.

Greenhouse gas impacts

The Economic Impact Assessment report (September 2015) does not quantify the greenhouse gas implications of burning the coal that will be extracted from the proposed mine. Clearly the burning of coal, will have a significant greenhouse gas impact and should be quantified and the costs fed into the economic analysis. While intended to take place in Korea, the greenhouse gas impacts are globally felt and are therefore warrant inclusion.

I conclude this letter with an appeal to the final consent authority for this project to take a slow drive through the Hunter Valley and also Ulan, and carefully observe the environmental destruction the coal industry has wreaked on these areas. Then ask, should we permit a Korean energy company to destroy the iconic Australian landscape that is the Bylong Valley with a large scale open cut coal mine?

Yours sincerely

Andy Hawkins

27 October 2015