Department of Industry
Resources & Energy

BN15/8000

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Dear Mr O'Donoghue

Bylong Coal Project (SSD 14-6367)
Review of Environmental Impact Statement

I refer to your email of 22 September 2015 regarding KEPCO Bylong Australia Pty Ltd's (KEPCO) application for the Bylong Coal Project in the Mid-Western Regional Council local government area.

NSW Department of Industry, Division of Resources & Energy (the Division) has reviewed the Bylong Coal Project Environmental Impact Statement (EIS) dated September 2015.

The Division supports the Bylong Coal Project (the Project) as a responsible utilisation of the State's coal resources that will generate employment opportunities and bring economic benefits to the local region and the State as a whole.

The Division, however, does not currently support the proposed retention of the rail loop and internal mine roads beyond the life of the mine. Accordingly, the Division requests the proponent justify the retention of mine infrastructure as a positive outcome in the final landform.

The following comments are directed at specific areas of the Division's responsibility for this proposal.

MINING TITLE

As coal is a prescribed mineral under the *Mining Act 1992*, the proponent is required to hold appropriate mining titles from the Division in order to mine this mineral. The proponent has demonstrated that the proposal has sufficient title over the project area to satisfy the requirements of section 380AA of the *Mining Act 1992*.

The Division notes the proponent's intention to convert part of Authorisations 287 and 342 to a mining lease. This will require the submission of a mining lease application to the Division. As part of this application the proponent will need to provide proof of native title extinguishment or go through the right to negotiate process.

Under the *Mining Act 1992*, mining and rehabilitation are regulated by conditions included in the mining lease, including requirements for the submission of a Mining Operations Plan (MOP) prior to the commencement of operations, and subsequent Annual Environmental Management Reports (AEMR).

REHABILITATION

The Division notes that the EIS has identified general rehabilitation strategies and objectives and adequately describes the functional domains of the project. Specific performance objectives and standards of each domain have been satisfactorily described.

The Division requires final landform design to be consistent with the surrounding topography and the EIS has provided objectives and criteria to which they will be implemented.

The Division accepts the conceptual landform design outlined in the EIS. However, the proponent should be aware that as part of the MOP, the Division will require further detail regarding final landform design, with specific reference to vertical relief and drainage.

It is noted in **sections 8.2.3 and 8.2.4** (Domains 4 and 5) of the EIS that the Rail Loop and all internal roads will be retained at mine closure. The Division's default position on infrastructure is total removal and rehabilitation. KEPCO should present a case for retaining infrastructure that may have a positive outcome in the final landform, but until that time it is the Division's position that the Rail Loop and all internal roads should be removed and the land rehabilitated.

Until the case is made for the retention of internal roads and the Rail Loop, the Division does not support the retention of this infrastructure upon mine closure.

ASSESSMENT OF THE RESOURCE

While amendments to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP) have removed the provision that made the economic significance of the resource the principle consideration when determining mining projects and requires the NSW Department of Industry to assess the significance of the resource, the Division considers that an analysis of the resource utilisation and its economics will assist the consent authority in considering the efficiency or otherwise of the development in terms of resource recovery (cl15(1) of the Mining SEPP).

This analysis concentrates on geological, mining and economic aspects of the project and the Division makes the following assessment:

Size, quality and availability of the resource
The Bylong Coal Project (the Project) is owned by KEPCO Bylong Australia Pty Ltd (the Proponent), a 100% owned subsidiary of Korea Electric Power Corporation.

The Project will initially be an open cut operation and then progress to underground mining in year 7 of the Project life. The life of the Project will be 25 years comprising a two year construction period and approximately 23 years of operational life. Approval is being sought to extract at a rate of up to 6.5 million tonnes per annum (Mtpa) of run-of mine (ROM) coal that would produce nearly 5 Mtpa of product coal.

The Division has verified that the Project will produce approximately 124 million tonnes (Mt) of ROM coal and approximately 90 Mt of product coal. The Proponent has completed resource and reserve estimation for the Project in accordance with the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves 2012 "the JORC Code".

Two export thermal quality coal products are proposed by the proponent. In essence a lower quality Ulan seam product targeted for the coastal Chinese market and a higher quality Coggan seam product targeted for the South Korean and Taiwanese market. A review of available coal quality information suggests this target is achievable. Raw ash levels necessitate washing of 75% of all Project coal to meet export market specifications, while the remaining 25% can bypass the Coal Handling and Preparation Plant. The Division considers that a total of 90 Mt of product (saleable) coal from the Project is feasible.

Over the life of the Project, assuming all production is sold on the export thermal market, the value of the coal produced would be worth around $8.7 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $3.7 billion.

Export income is vital for the health of both the NSW and Australian economy. Export income contributes to the Nation's balance of trade which provides positive benefits to both NSW and Australia's credit rating.

The Project is located within the northern part of the Western coalfield, which had four mines producing coal as at June 2015, two are underground mines and two are open cuts. If approved, the Project producing at its maximum ROM production rate of 6.5 Mtpa would be in the middle of the range of production profiles of coal mines in the region and would be ranked thirteenth out of the 44 producing NSW coal mines in 2014-15. The Project producing at its maximum ROM rate would be considered slightly above a medium sized mine when compared to other operating coal mines in NSW, i.e. the average size of operating coal mines in NSW in 2014-15 was around 5 Mtpa of ROM coal.

Resource Recovery
Large areas of low strip ratio open cut resources have been excluded from mine planning predominantly to avoid areas defined as Biophysical Strategic Agricultural Land (BSAL). Other constraints to open cut mine design include the Bylong Village, infrastructure and rivers, creeks and associated alluvials.

The open cut mine design proposes to recover resources from four coal horizons. Other coal horizons in the open cut design are not considered viable targets for extraction due to geological constraints. Proposed open cut development will not sterilise any remaining potential open cut or underground resources.

Four areas include resources amenable to extraction by underground mining methods. Geological constraints, potential subsidence of sensitive features, and resource size were major factors influencing the decision to propose the development of only one underground resource. The Coggan Seam, which is not present in nearby operations is the only viable underground coal target for the Project. Underground mine planning proposes to extract, where possible, all plies of the Coggan Seam as a working section. Underground extraction of the Coggan Seam will unavoidably sterilise Ulan Seam resources. Geotechnical constraints associated with small interburden between the seams do not allow both to be extracted. The Ulan Seam, mined underground in nearby operations, does not present a viable working section at the Project.

Given the constraints outlined in the proponent's EIS, the Division considers the Project mine plan for both open cut and underground operations to adequately recover coal resources.

Coal Royalty

The Project is both a proposed underground and open cut mine and as such a royalty rate of 7.2% applies to the underground mine and 8.2% to the open cut mine, these rates are applicable to the net disposal value. Net disposal value is the price received per tonne minus any allowable deductions. The main allowable deduction is for coal beneficiation which is either; $3.50 per tonne for coal subjected to a full washing cycle, or $2.00 per tonne for coal subjected to a simple washing process, or $0.50 per tonne for coal that is washed and screened.

As previously stated, 75% of the product coal will be washed and the remainder will be crushed. As result the allowable deduction per tonne of washed coal will be $4.50 ($3.50 for washing and $1.00 for levies) and $1.50 for crushed coal ($0.50 for crushing and a $1.00 for levies).

One of the most important assumptions in the calculation of future Royalty for a coal proposal is the estimate of a future coal price over the life of a project. Coal from the Project is expected to be sold into the export thermal market. Due to quality differences it is expected that a majority of the product can be sold into South Korea and Taiwan, with the lower quality coal sold into the coastal Chinese market.

For the 5 quarters from June 2014 to June 2015 (Coal Services data) export thermal coal prices from NSW were around $A80 per tonne. The bottom of the price cycle (in A$ terms at least) may have occurred over this period, the falling A$ has assisted in keeping NSW export thermal prices from falling further. Therefore the Division has assumed a price of around A$80 per tonne for the Project in the short term.

Coal price forecasting is inherently difficult and over the long term time frame of the Project there will be many variations in coal prices. However, there is a growing consensus in the coal industry that coal prices will improve in the medium to long term over the current five year lows. For its royalty calculation, the Division uses the current low short term coal prices, and medium to long term export thermal prices (in real terms) in the range of A$75 to $A110 per tonne. The lower end of this price range has been used by the Division for Ulan seam product and the higher end for Coggan seam product.

Another important aspect of future royalty calculation for a proposed coal project is estimation of future annual production. The Division has estimated that if the Project is approved, around 90 Mtpa of product coal would be able to be economically mined from the Project area from 2018 to 2040.

Using the above parameters the Division has calculated that in a typical full production year the State will receive around $27 million per annum in royalty and $611 million over the life of the Project. The net present value of this royalty stream would be $266 million using a 7% real discount rate.

Other Factors

The Division also notes from the Economic Assessment prepared by the Proponent that the Project will contribute the following to the NSW economy every year for 23 years:

- $855 million in annual direct and indirect regional output or business turnover;
- $492 million in annual direct and indirect regional value added;
- $135 million in annual direct and indirect household income.

The Division also notes from the Economic Assessment prepared by the Proponent that the Project will contribute the following to the regional economy every year for 23 years:

- $624 million in annual direct and indirect regional output or business turnover;
- $378 million in annual direct and indirect regional value added;
- $72 million in annual direct and indirect household income.

SUBSIDENCE

The Division considers there are no feasibility issues with the proposed mine layout arising from subsidence related health and safety risks. Any such risks should be manageable during the Extraction Plan stage of the development and will be regulated by the Division, post planning approval, under relevant Work Health and Safety laws.

DRAFT RECOMMENDED CONDITIONS OF APPROVAL

If the Project is granted development approval, the Division recommends that the following conditions be incorporated into the Development Consent, if granted:

Rehabilitation Plan

1. The proponent must prepare and implement a Rehabilitation Plan to the satisfaction of the Secretary of the Department of Industry, Skills and Regional Development. The Rehabilitation Plan must:

   a. be prepared in accordance with the Division's guidelines;

   b. be submitted and approved by the Secretary of the Department of Industry, Skills and Regional Development prior to the commencement of activities;

   c. address all aspects of rehabilitation and mine closure, including post mining land use assessment, rehabilitation objectives, completion criteria and rehabilitation monitoring.

d. include a final landform design that is consistent with the surrounding topography of the area and considers natural drainage design and relief patterns and principles.

Note: The approved Mining Operation Plan (which will become the REMP once the Mining Act Amendments have commenced), required as a condition of the Mining Lease(s) issued in relation to this project, will satisfy the requirements of this condition for a Rehabilitation Plan.

Should you have any enquires regarding this matter please contact Adrian Delany, Acting Director Industry Coordination on (02) 4931 6437.

Yours sincerely

K Hargreaves

Kylie Hargreaves 6/11/15
Deputy Secretary
Resources & Energy