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20 June 2013

Attention: Clay Preshaw

Dear Mr Preshaw,

### **RE: Wallarah 2 Coal Project – Environmental Impact Statement Submission**

This submission is in relation to the Wallarah 2 Coal Project (application no. SSD-497). TransGrid is a State Owned Corporation responsible for the planning, development, operation and maintenance of the high-voltage electricity transmission system in New South Wales.

Currently, two of TransGrid's existing 330 kilovolt (kV) transmission lines (No. 22 Vales Point to Sydney North, and No. 2M Munmorah Power Station to Tuggerah) currently traverse the project area. In addition, the project would be located less than 500 metres to TransGrid's existing No. 26 Munmorah Power Station to Sydney West 330 kV transmission line.

The project must ensure the safe, reliable and efficient continued operation and maintenance of TransGrid's electricity network. The structural integrity and operation of the transmission lines and structures shall not be compromised by the construction, operation and/or decommissioning of the mine.

TransGrid has reviewed the Environmental Impact Statement for the Wallarah 2 Coal Project and provides the following comments in relation to the project's impacts on TransGrid's high-voltage electricity network.

#### Subsidence Impacts on Transmission Towers

- Subsidence from the proposed mine would affect some 29 transmission line towers, including 14 tension towers. Section 5.14 of the EIS describes the possible impact of the mine on these towers, including correspondence from TransGrid, and notes that tension towers are much more difficult to protect than suspension towers. This situation is exacerbated where those towers carry larger deviation angles (typically 10 degrees or higher) of the conductors.

Section 5.14.2 (pg 99) of Appendix H (Subsidence Predictions and Impact Assessment) suggests a number of preventative strategies that might be considered for such towers, including tower strengthening, temporary towers or poles, re-routing the line and installation of underground cables. Whilst some of these strategies may be technically feasible, they are generally not practicable. Most of these options would entail repeated and/or extended shutdown outages of the transmission line. These outages would be restricted to times of low electrical demand (Spring and Autumn) and would most likely impact pricing on the National Electricity Market.

TransGrid's preference is that the large angle tension towers shall be protected by sterilising coal below or varying the mine layout to limit strains and tilts to an acceptable level.

- If the proponent proceeds with mining under TransGrid's transmission lines, then any transmission structures and/or foundations must be protected from subsidence impacts. TransGrid's electricity network must not be compromised, and major redesigning, modification or relocation of the line may be required. Adequate time shall be allowed for feasibility studies, approvals, and construction of the



redesign/ modification/ relocation of the transmission line. As mentioned above, construction of the modified/relocated transmission line would be restricted to limited outage periods.

- TransGrid requires access to each transmission structure of the transmission line, for construction, maintenance and emergency situations. Subsidence of access tracks to the transmission structures must be considered, and access must be maintained at all times.
- All costs of any mitigation measures, adjustments, repairs, redesign, modification or relocation of the transmission lines shall be borne by the proponent.
- If the project results in subsidence impacts that undermine any transmission towers during mining activities, any costs from disruptions in the electricity network shall be borne by the proponent.

#### Subsidence Impacts on Ground Clearance

- Section 5.14.2 (pg 98) of Appendix H discusses the reduction of cable clearances resulting from subsidence. Identified management strategies include fencing off areas of the easement and earthworks to increase clearances to ground. Given that predicted subsidence levels in some locations are in the order of 2.0-2.5 metres, reductions in ground clearance is likely to be a significant electrical safety and reliability issue, especially for high voltage transmission lines.

It is also noted that management strategies to achieve acceptable ground clearances may involve substantial disturbance to vegetation, soils and land use in the affected areas.

Fencing off certain areas of transmission line easements (with ground clearance violations) is not considered to be a reasonable or practicable solution for maintaining safe operational clearances of the transmission line and public safety. Furthermore, current easement conditions with affected property owners continue to allow areas within the easement to be utilised by property owners and occupiers for certain activities. The option for fencing off areas subject to ground clearance violations as a result of mine subsidence would ultimately result in a loss of use of land for affected property owners. TransGrid does not consider it reasonable to bare any costs associated with consequential property owner compensation.

#### Consultation

- It is noted that although TransGrid was consulted for the previously refused Wallarah 2 Coal Project (last correspondence in 2009 for preliminary information), consultation has not occurred with TransGrid for this particular project application. As per Section 7.1.4 (pg 111) of the EIS, TransGrid appreciates that the Extraction Plan will include consultation with TransGrid to develop management strategies for the continued safe operation of the transmission line.
- Section 7.1.3 (pg 107) of the EIS states that WACJV will seek to establish a subsidence management committee, with officers from the WACJV, TransGrid and the MSB, so that the appropriate management strategies can be developed. TransGrid shall be appropriately remunerated for any involvement on the subsidence management committee.

TransGrid would appreciate ongoing consultation in relation to issues affecting the electricity network. Please contact Darren Clarke on (02) 8204 6314 or [Darren.Clarke@transgrid.com.au](mailto:Darren.Clarke@transgrid.com.au) should you wish to discuss any other issues in relation to this project.

Yours sincerely



**Denise Lo**  
*Environmental Officer*  
*Environment, Property and Development Compliance*

