

BEFORE THE DISTRICT HEARINGS PANEL

Under the Resource Management Act 1991

In the matter of

**Proposed Queenstown Lakes District Plan – Chapter 21 Rural;
Chapter 23 Gibbston Character Zone; and Chapter 33
Indigenous Vegetation and Biodiversity**

and

**Transpower New Zealand Limited (Submitter 805 and Further
Submitter 1301)**

Submitter

**Statement of Evidence in Chief of Andrew Renton on
behalf of Transpower New Zealand Limited dated 21 April
2016**

BELL GULLY

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Introduction

1. My full name is Andrew Charles Renton.
2. I am employed by Transpower New Zealand Limited (**Transpower**) as the Senior Principal Engineer. I have a New Zealand Certificate of Engineering and Bachelor of Engineering (Electrical).
3. I have over 26 years' experience in transmission engineering work. I currently work in the Grid Development Division of Transpower. My role involves investigating and providing holistic, pragmatic and strategic advice to developers and the infrastructure divisions of councils, on suitable and cost effective transmission solutions as well as new developments and technologies. My previous roles at Transpower have included the Asset Development Engineering Manager responsible for all substation and transmission line engineering development work.
4. I am familiar with the National Grid assets within the Queenstown Lakes District.

Code of Conduct

5. I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment Court Consolidated Practice Note 2014. I agree to comply with this Code of Conduct. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express. While I am employed by Transpower, I am providing this evidence in my capacity as an expert in electrical engineering and matters relating to the National Grid.

Scope of Evidence

6. My evidence will address the following matters:
 - (a) Transpower's vegetation clearance requirements; and
 - (b) the requirement for Transpower to clear indigenous vegetation as per the Electricity (Hazards from Trees) Regulations 2003.

Vegetation Clearance

7. If not managed effectively, vegetation can pose significant risks to the National Grid. These risks can be on the operation and maintenance of the Grid (including emergency repair work), along with risks to people and properties.
8. In particular, trees growing close to a line, and which cause a flashover from the conductor to the tree, may cause:
 - (a) A circuit fault that affects the operation and supply of the National Grid;
 - (b) Injury or death to anyone who may be near the tree at the time of the fault;
 - (c) Fire hazard (as shown in the photo below); or
 - (d) Damage to the tree, land or property.



9. The following photo is of the BPE-WRK A National Grid line (Tower 420) that traversed a forestry block that was not trimmed sufficiently and fell across the line.



10. Transpower needs to carry out routine vegetation management to ensure that its existing assets are kept clear of vegetation so that it cannot damage the transmission assets or create hazard risks for the public or Transpower staff and contractors. Transpower also carries out vegetation management to ensure that existing access tracks to the assets are maintained.
11. Transpower may also need to carry out vegetation removal for the construction of new assets or for new access tracks to both existing and new assets.

Electricity (Hazards from Trees) Regulations 2003

12. The Electricity (Hazards from Trees) Regulations 2003 (**Tree Hazard Regulations**) are relevant to Transpower's vegetation management activities. The Tree Hazard Regulations are mandatory and:
 - (a) define safe separation distances between trees and overhead electricity lines;
 - (b) set rules about who has responsibility for cutting and trimming trees that encroach on those distances;
 - (c) identify who is liable for when those rules are breached; and
 - (d) provide an arbitration system to resolve disputes about the operation of the Tree Hazard Regulations.
13. Transpower undertakes regular inspections of its transmission line in order to identify trees that may require trimming or removal in accordance with the Tree Hazard Regulations.
14. Transpower seeks the ability to clear vegetation and fell trees in circumstances where the tree is threatening to damage the National Grid, which in turn has the potential to result in significant outages, prior to the damage occurring. This is anticipated by Clause 14(1) of the Tree Hazard Regulations which states:

A works owner must, without delay, undertake any work in relation to a tree (including the roots of that tree) if the works owner becomes aware that there is immediate danger to persons or property from a conductor because—

 - (a) the tree has come into contact with, or constitutes a serious hazard to, that conductor; or

- (b) the tree has caused damage to that conductor and is likely to cause further damage to that conductor.

Andrew Renton

21 April 2016