

1. EXECUTIVE SUMMARY

1. Aurora Energy Limited (“Aurora”), is an electricity distribution business formed in 2003 as a wholly owned subsidiary of Dunedin City Holdings Limited. It is predominantly focused on the distribution of electricity to Dunedin City and Central Otago. Aurora is unique among New Zealand electricity distribution businesses as it is solely an asset owner, with management and operations fully outsourced to its sister company Delta Utility Services Limited.
2. Aurora’s network is hierarchical, or branchlike, in nature. It has a number of high voltage cables and lines which each carry a large amount of electricity and which each supply many thousands of customers. Electricity is transformed off these high voltage lines to thousands of low voltage lines which each serve anywhere between one and a few hundred customers.
3. Given the number of customers supplied from each of the high voltage lines, the failure of any one of these high voltage lines has a far greater impact than the failure of one, or indeed many, low voltage lines. Aurora’s high voltage lines are critical to its network and critically important to the Queenstown Lakes region.
4. Aurora is a Lifeline Utility as named in the Civil Defence Emergency Management Act 2002 (CDEM Act). Under the CDEM Act, Aurora is required to ensure it is able to function to the fullest possible extent during and after an emergency.
5. In recognition of the importance of this role, Aurora was an active participant in the Otago Lifelines Utility vulnerabilities project¹ which assessed the potential impacts of hazards on the region’s lifeline infrastructure and identified mitigation strategies to reduce the risk to the community. One of Aurora’s identified vulnerabilities is the risk of damage occurring to critical high voltage lines and our inability to readily undertake repairs safely.
6. The Electricity Act 1992 provides some protection for lines that were legally installed under previous Acts and Regulations before 1992. This includes the right to occupy exclusively the space inhabited by the lines, and to operate, inspect, maintain, replace and upgrade the lines, because the lines have the status of

¹ The Otago Lifelines Utility Group area includes the Queenstown Lakes District, Central Otago District, Waitaki District, Dunedin District and Clutha District.

“existing works” under the Electricity Act 1992. These rights are referred to as statutory easement rights or existing use rights.

7. However, the Electricity Act 1992 does not include detailed obligations for land owners under the lines and does not prevent underbuild or land use incompatible with the ongoing use and maintenance of such lines. It is therefore possible that buildings could be constructed, and other activities undertaken, beneath the lines. Therefore in my view, the Electricity Act 1992, on its own, does not afford sufficient protection from activities interfering with lines.
8. The New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34:2001) sets minimum safe electrical distance requirements for overhead electric line installations and other works associated with the supply of electricity from generating stations to end users. The minimum safe distances have been set primarily to protect persons, property, vehicles and mobile plant from harm or damage from electrical hazards. The minimum distances are also a guide for the design of electrical works within substations, generating stations or similar areas where electrical equipment and fittings have to be operated and maintained.
9. Under NZECP34, notification to Aurora of a build is only required if the build falls within minimum distances. This does not always occur, and I have included in my evidence in chief, examples of breaches of NZECP34 which have occurred on the Aurora network. I therefore believe that having NZECP34 prescriptions included within the District Plan, will assist in reducing the incidence of prohibited works including underbuilds; earthworks and tree planting.
10. The risk associated with such breaches can be minimized and/ or mitigated with suitable corridor protection rules in the proposed District Plan. Without such corridor protection rules there is a risk of development under or in close proximity to high voltage lines as no other legislation applicable to the lines provides suitable safeguard from development that may put this infrastructure at risk.
11. Aurora seeks protection for just 16% of its distribution line and cables which are considered to meet the definition of critical infrastructure. Corridor protection is not sought for low voltage lines or the majority of Aurora's 6.6/11kV high voltage line network.

| Description | Total km on the Aurora network in Queenstown Lakes Area | Total km Aurora |
|--------------------------|---|-----------------------|
| 33/66 kV lines and cable | 147 | 147 |
| 6.6/11kV lines | 597 | 116 |
| 6.6/11kV Cable | 408 | 9 |
| 400V lines/Cable | 536 | 0 |

- 3.8** The lines that Aurora have identified for protection are critical to the supply of electricity within the Queenstown Lakes District. They secure supply for important facilities that need to have secure electricity supply on a day to day basis, but also during disaster events. Whilst existing cases of underbuild will not be affected or be able to be reversed by the insertion of corridor protection rules in the Proposed District Plan, it will stop any more instances occurring without Aurora having an opportunity to review and participate in the process. It will also increase awareness of the critical lines and the care that needs to be taken when developing in close proximity to them.