

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF resource consent applications by Rangitata
Diversion Race Management Limited (**RDRML**)
to the Canterbury Regional Council and
Ashburton District Council for resource
consents for the construction, operation and
maintenance of the Klondyke Water Storage
Facility, its associated water takes from and
discharges to the Rangitata River, and all
associated activities

**STATEMENT OF EVIDENCE OF HOLLY SIMPERINGHAM ON BEHALF OF TRUSTPOWER
LIMITED**

2nd May 2018

STATEMENT OF EVIDENCE OF HOLLY SIMPERINGHAM

Introduction

1. My name is Holly Sarah Simperingham.
2. I hold a Bachelor of Science (Geography, Environmental Science) from the University of Auckland. I have been employed by Trustpower Ltd (Trustpower) for three years as an Environmental Advisor within the generation division. In my role I have responsibility for obtaining resource consents for development and maintenance activities associated with Trustpower's hydro assets as well as assisting with the implementation of Trustpower's Environmental Management System and associated continuous improvement initiatives.
3. Within the Canterbury Region, I am actively working on consenting and other resource management matters associated with the operation of the Coleridge and Highbank Hydroelectric Power Schemes (**HEPS**). In doing so, I have knowledge of the relevant planning documents, and also work closely with local stakeholders and interested parties. I am also a trustee on the Coleridge Habitat Enhancement Trust.
4. I am giving evidence on behalf of Trustpower Limited regarding Trustpower's support for the proposal by Rangitata Diversion Race Management Ltd (**RDRML**) to establish a water storage facility and related activities at Klondyke (the **Proposal**).
5. Trustpower is a submitter to the proposal. I confirm that I am authorised to give this evidence on behalf of Trustpower.

Scope of evidence

6. My evidence will cover:
 - (a) Trustpower's relationship to RDRML and its use of water from the Rangitata Diversion Race (**RDR**);
 - (b) The benefits of the Proposal;

(c) Trustpower's Consideration of Relevant Planning Documents.

Trustpower's relationship to RDRML and its use of water from the RDR

7. Trustpower is a publicly listed company and is predominantly New Zealand owned. Trustpower currently generates approximately 8% of New Zealand's total electricity supply and serves approximately 220,000 electricity customers, 32,000 gas customers and 85,000 telecommunications customers.
8. Trustpower has had a presence in the Canterbury region since the purchase of the Lake Coleridge HEPS from the Electricity Corporation of New Zealand in 1999. In the same year, Trustpower also purchased the Highbank and Montalto HEPS and as such holds shares in RDRML which manages the RDR scheme. Both the Highbank and Montalto HEPS utilise water from the Rangitata Diversion Race to generate hydroelectricity. In addition, following the construction by Trustpower of a pump station at Highbank in 2011 Trustpower has undertaken the pumping of water from the Rakaia River up to the RDR on behalf of Barhill Chertsey Irrigation Ltd (BCI).
9. Trustpower also has experience with water storage for irrigation through the Lake Coleridge Project. This is an initiative that involves storing irrigator's consented allocation of water in Lake Coleridge on their behalf when they are not using it, the water is then released at a later date when demand is unable to be satisfied directly from the Rakaia River flow.
10. The Lake Coleridge Project required a variation to the Rakaia River Water Conservation Order (via the ECAN Act provisions at that time) and was recognised within the Canterbury Water Management Strategy (**CWMS**) as one of the key strategic infrastructure projects available to give effect to elements of the strategy. The Lake Coleridge Project was specifically listed as part of the vision for "Investment in new infrastructure". In this respect it could integrate infrastructure development with the security and efficiency of energy supply, more efficient irrigation and land management practices, and improve river flows and groundwater recharge.

11. The project has now become part of the wider regional water distribution infrastructure network and forms a key node (the “Rakaia node”) in flexibility and optionality for water management on the plains.
12. This enhancement to the Coleridge HEPS provides a mechanism that enables multiple and efficient use of the same water resource and associated infrastructure and is similar to the Klondyke Proposal in that regard. As a result of the Lake Coleridge Project, irrigators now have the ability to achieve very high levels of reliability. More significantly, the provision of storage provides “certainty” that demand can be met allowing irrigators to be more targeted and efficient in how they manage and use water. We understand this increased certainty of supply, coupled with very high reliability, has enabled irrigators to be more efficient on water use, with anecdotal examples as low as two thirds of that originally anticipated.

Benefits of the Klondyke Water Storage Proposal

13. The Klondyke water storage proposal provides some small benefits to Trustpower’s renewable electricity generation at the Highbank and Montalto Schemes. These include:
 - (a) Slightly improving the certainty of water supply available for generation during periods of water restrictions on the Rangitata;
 - (b) Providing the potential for increased flexibility between the operations of the power stations and irrigators. Water storage allows options for water sharing that could solve supply issues in an uncertain future. Trustpower considers water storage is a key function for allowing water to be available for the best use at the time.
14. In terms of wider benefits, the proposal creates more certainty for users and increases the options for land use. With increased certainty of supply, there is a clear benefit to farmers and associated industries in weathering financial and operational risk, and in diversifying farm practices. This in turn enhances the social, environmental, economic and cultural wellbeing of the Canterbury Region.
15. Improved certainty of supply can lead to more sustainable and efficient use of water and improved environmental outcomes by allowing water to be stored during times

of excess; water is then only used when necessary during times of stress therefore reducing pressure on the environment and infrastructure during water shortages. The proposal also enables potential future environmental uses for the water, such as Managed Aquifer Recharge and Targeted Stream Augmentation, which may result in positive effects on the environment.

Trustpower's Consideration of Relevant Planning Documents

16. Through my evidence Trustpower wishes to comment on how the Proposal sits with the relevant planning documents.

National Policy Statement for Renewable Energy Generation (2001) (NPSREG)

17. Policy B of the NPSREG sets out that decision-makers shall have particular regard to *“even minor reductions in the generation output of existing renewable electricity generation activities can cumulatively have significant adverse effects on national, regional and local renewable electricity generation output”*. Trustpower acknowledges that during construction, there may be interruptions to water supply for generation. However given the temporary nature, we believe these can be managed between the parties so that minimal disruptions to the generation activities occur.
18. With regard to Policy C1, and *“the need to locate the renewable electricity generation activity where the renewable energy resource is available”*. The added water storage capacity close to Trustpower's two hydroelectric power stations on the RDR provides for a slight improvement in the reliability of water supply available for generation during periods of water restrictions on the Rangitata, directly giving effect to the NPSREG.
19. The benefits to generation from available water storage assists in achieving the NPSREG's objectives of avoiding the reliance on imported fuels and finite resources in achieving the Country's electricity generation needs and renewable electricity generation targets.

20. Overall, Trustpower considers that the proposal supports the objectives of the NPSREG.

Canterbury Water Management Strategy

21. As discussed, Trustpower considers that the proposal is consistent with the vision of the Canterbury Water Management Strategy as it will enable the efficient and productive use of, and certainty of access to water resources. The Canterbury Water Management Strategy identifies water storage, particularly from the alpine rivers, as being of long term and significant benefit to Canterbury.

Summary

22. Overall, the direct benefits for Trustpower's generation portfolio are small, however as a key shareholder of RDRML, it supports the proposal and the wider benefits it will bring to the Canterbury Region, its experience with Coleridge is that water storage will contribute to a positive impact on the Canterbury Region.

Holly Simperingham

2 May 2018