Submission on the proposed Otago Regional Policy Statement – Freshwater Provisions

Submission to the Otago Regional Council

29 November 2022

Written Submission on Proposed Otago Regional Policy Statement – Freshwater Provisions

To: Otago Regional Council

1. **Name of submitte**r: Manawa Energy Limited (Manawa Energy)
2. This is a submission on the **Proposed Regional Policy Statement – Freshwater Provisions for the Otago Regional Council**
3. **Manawa Energy could not** gain an advantage in trade competition through this submission.
4. **Manawa Energy is not** directly affected by an effect of the subject matter of the submission that:
   a. adversely affects the environment; and
   b. does not relate to trade competition or the effects of trade competition.
5. **Manawa Energy does wish** to be heard in support of this submission**.**
6. If others make a similar submission, **Manawa Energy will** consider presenting a joint case with them at a hearing.
7. Submitter Details:

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Environmental Policy Manager

For, and on behalf of, Manawa Energy Limited

Dated: **29 November 2022**

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1.0 Introduction

1.1 Manawa Energy is a leading hydro-electricity generator in New Zealand. The company owns and operates 25 hydro-electricity schemes across New Zealand and generates approximately 8% of New Zealand's total hydro-electricity supply on an annual basis.

1.2 Manawa Energy's existing hydro-electric power schemes are lifeline utilities under the Resource Management Act 1991 ('RMA') and Civil Defence Emergency Management Act 2002. Electricity generated by Manawa Energy's hydro-electric power schemes is conveyed to consumers via the National Grid and local distribution networks.

1.3 In the Otago region Manawa Energy operates the Waipori, Deep Stream and Paerau/Patearoa hydro-electric power schemes. The electricity generated at these schemes produces enough electricity for approximately 35,000 homes, which plays a vital role in ensuring a reliable supply of electricity to the Otago community. Electricity generated at these schemes is fed into Aurora's distribution network, and Transpower's National Grid which then supplies industrial, commercial and residential consumers throughout the Region.

1.4 The supply of electricity via both networks is critically important to security of electricity supply, and the social and economic wellbeing of a range of different communities throughout New Zealand. Noting the vulnerability of the Otago Region to natural events, the necessity to protect and maintain the electricity supply is a matter of some importance.

1.5 The provision of existing and new renewable electricity generation infrastructure is identified as a matter of national significance under the RMA (as identified in the National Policy Statement for Renewable Electricity Generation ('NPS-REG')). Despite this recognition, the development of plan provisions at regional and local scales does not always recognise or provide for existing or future renewable electricity generation. There is a need to ensure a coordinated policy response to these issues and that includes all regions making provision for this to occur in a way that contributes to the national outcomes.

1.6 Manawa Energy recognises the need for a clear and directive Regional Policy that addresses all matters of Regional Significance, gives effect to National Policy Statements including for Renewable Electricity Generation, and clearly sets out anticipated outcomes for regional and district plans. Manawa Energy supports the intent to give effect to the NPS-REG and to recognise that recognition of and provision for renewable electricity generation is a matter of national importance. Despite this recognition, the development of provisions at regional and local scales does not always recognise or provide for existing or future renewable electricity generation. This means that the operation, upgrade and development of renewable electricity generation infrastructure is increasingly at risk of further constraints.

2.0 Context to Manawa Energy's Submission

2.1 The Government has committed to New Zealand transitioning to 100% renewable electricity generation by 2030 and is developing policy packages which aim to accelerate the deployment of renewable electricity generation and reduce carbon emissions.

2.2 Alongside that sits New Zealand's commitment to both the UNFCCC[1] and the Paris Climate Change Agreement – has committed to reducing greenhouse gas emissions to 50% below the 2005 levels by 2030, and a domestic 'net zero' commitment of all greenhouse gas emissions (except methane) by 2050.

1 United Nations Framework Convention on Climate Change

2.3 For these commitments to be achieved, rapid electrification of the economy will be required, and this will require a significant increase in the installed capacity of emissions free renewable electricity generation.

2.4 Approximately 1,250 GWh of new renewable generation will be required on average each year until 2050. By comparison, an average of 380 GWh of new renewable generation was commissioned annually in the 30 years to 2020. Furthermore, the future development rate will need to be even higher if existing renewable electricity stations' operating capabilities are reduced when current resource consents expire.

2.5 Given that climate change is one of the most significant issues facing New Zealand, there is a need to ensure a coordinated policy response to these issues and that includes all regions making provision for this to occur in a way that contributes to the national outcomes.

2.6 It is against that background, that Manawa Energy is seeking a stronger, more supportive, and enabling regulatory framework for renewable electricity generation, including the protection of existing renewable electricity generation activities.

3.0 Manawa Energy's Unique Portfolio

3.1 While some of Manawa Energy's larger schemes are connected to the national grid, a number of Manawa Energy's electricity generation schemes are embedded into the local electricity supply network and form a vital element in sustainable electricity supply within New Zealand. The location and scale of Manawa Energy schemes, along with a commitment to local supply (so as to ensure that electricity is consumed as close as possible to where it is generated) is a key and somewhat unique feature of Manawa Energy's generation philosophy and portfolio.

3.2 Manawa Energy differs from other electricity generators in the following ways:

- its assets are typically moderate in scale and output;
- the schemes are relatively numerous and complex;
- the capital investment in individual schemes is modest in comparison to other large generators; and
- the schemes are spread throughout a number of districts and regions in New Zealand often serving provincial areas where other large generators are not represented.

3.3 The value of Manawa Energy's generation assets resides within its resource consents and, in particular, within its water permits, which are required for every dam, diversion, abstraction, use and discharge of water associated with each scheme.

3.4 In the Otago Region Manawa has the Waipori, Deep Stream and Paerau/Patearoa hydro-electric power schemes ('**HEPS**') which are either connected to the National Grid or embedded into the local distribution network and are therefore considered both nationally and regionally significant infrastructure. These three schemes are also within the Taieri Freshwater Management Unit ('**FMU**').

3.5 Manawa's hydro-electric generation assets in the Otago region produce around 268 GWh, enough electricity to supply approximately 35,000 typical New Zealand households, which is around 40% of the households in the Otago region.

Waipori Hydro-Electric Power Scheme

3.6 The Waipori HEPS, Manawa's largest scheme at 86MW, begins near the headwaters of the Waipori River, high in the Lammerlaw Range. A web of water races, open channels, diversion tunnels and

pipelines feed the scheme. The scheme consists of a large hydroelectric storage lake – Lake Mahinerangi, which feeds four power stations located on the Waipori River. It has a total average annual output of 192GWh, sufficient to supply electricity to approximately 24,000 typical New Zealand households.

3.7 The Waipori Scheme was commissioned in 1907 and generates electricity from the Waipori River. The system begins near the headwaters of the Waipori River, high in the Lammerlaw Range. A web of water races, open channels, diversion tunnels and pipelines convey water into the storage reservoir, Lake Mahinerangi. The Waipori Scheme includes four hydro power stations located downstream of the Lake within the Lower Waipori River gorge, with a combined installed generation capacity of 86 MW.

3.8 The formation of Lake Mahinerangi for hydro-electric power generation in 1907 coincided with the end to gold mining in the Waipori area. A number of historic water or mining races, constructed to divert water for sluicing and sifting purposes as part of the gold mining process in the area, were incorporated into the scheme to divert additional water into Lake Mahinerangi for electricity generation.

3.9 The Waipori scheme is particularly important for regional security of supply as it is able to supply electricity into both the National Grid and the local distribution network.

Deep Stream Hydro-Electric Power Scheme

3.10 The Deep Stream HEPS was commissioned in 2008, and diverts water from Deep Stream, via a canal to a water storage reservoir, and then allows the water to be released through canals, and passes through two power stations, generating a total of 6MW. This water then flows into Lake Mahinerangi via North West Creek for further generation through the Waipori Scheme. The Deep Stream HEPS supplies power equivalent to the annual demand of 3,100 typical New Zealand households and represents an emergency water supply for Dunedin City in the event of prolonged drought.

Paerau/Patearoa Hydro-Electric Power Scheme

3.11 The Paerau/Patearoa HEPS is a joint hydroelectric/irrigation scheme located within the Maniototo sub-region of the Taieri Catchment, utilising water diverted from storage reservoirs along the Taieri River. It is made up of the Paerau Power Station which has an annual output of 56 GWh and the Patearoa Power Station which has an annual output of 8.3 GWh. Both stations were commissioned in 1984 and between them produce an annual average output of 62GWh, sufficient to supply electricity to approximately 7,750 typical New Zealand households.

4.0 Manawa Energy's Detailed Submission

Text changes to the proposed Otago Regional Policy Statement – Freshwater provisions sought as part of this submission are shown as ~~strikeout~~ for text to be deleted and **bold underlined** for text to be added.

Chapter / provision	Support / Oppose	Manawa Energy's reasons for submission	Relief sought
DEFINITIONS			
Definition of 'Specified Infrastructure'	Support	Manawa support the recognition of renewable electricity generation facilities, and the significance of these in a regional context and as a lifeline utility (defined in the Civil Defence Emergency Management Act 2002), in this definition.	Retain this definition and ensure that clauses (a) and (b) of the definition are retained.
SRMR – SIGNIFICANT RESOURCE MANAGEMENT ISSUES FOR THE REGION			
SRMR–I5 – Freshwater demand exceeds capacity in some places	Support in part	Manawa notes that hydro-electric power supply is acknowledged under this issue as being an important matter for the region and this recognition needs to be retained. Further the role that renewable electricity generation plays in supporting social needs of the community should also be recognised.	Retain the wording under the 'economic' heading as notified. Amend the wording under the 'social' heading as follows: Ensuring appropriate freshwater supply for human use is available as part of planned urban growth is essential. It is possible this may require consideration of additional freshwater storage in the future. The region's *freshwater* assets also support a range of recreation uses, for example camping, fishing, *water* sports, and swimming. **The use of freshwater for renewable electricity generation provides and supports a range of activities, associated with people's wellbeing.** These values are strongly linked to environmental values and as such, reduced

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			environmental flows have a corresponding negative impact on social and cultural values.
POLICY LF–WAI–P1 – PRIORITISATION			
LF – WAI – O1 Te Mana o te Wai	Support	Manawa supports this objective and the necessity to recognise Te Mana o te Wai.	Retain this objective as notified.
Policy LF–WAI–P1 – Prioritisation	Support in part	The priorities in this policy appear to be based on those outlined in Objective 2.1 of the NPS–FM – with the addition of a reference to mana whenua and interacting with water through ingestion and immersive activities. This objective identifies "health needs of people" but does not state that this is intended to be limited to ingestion or immersion, as has been interpreted and applied in the PORPS. The ORC has taken a position of reinterpreting the NPS to a narrower extent that what is directed by that document. Manawa consider it important that recognition is made of the role of renewable electricity generation (including hydro power schemes) in meeting the health and wellbeing needs of people and communities. The health needs of people, stemming from the use of water, include lifeline utilities that use water to provide essential health needs. The ability for society to function relies on the ability to generate electricity for heating and lighting, cooking food, disposal of wastewater, provision of clean water, operation hospitals and the like. These fundamental health and wellbeing needs of people should be incorporated into priority 2 and are different from the generality of uses of water. It is not likely that other indirect uses of water could argue the same direct use and provision connection to health needs of people.	Amend clause (2) as follows: (2) second, the health and well-being needs of people, te hauora o te tangata; interacting with water through ingestion (such as drinking water and consuming harvested resources) and immersive activities (such as harvesting resources and bathing), **and through the use of water for renewable electricity generation,** and

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LF – VM (VISIONS AND MANAGEMENT)			
Policy LF–VM–O4 – Taieri FMU vision	Support in part	Manawa's primary assets in the Otago region are the Deep Stream, Waipori and Paerau/Patearoa hydroelectric power schemes – all of which are located within the Taieri FMU. These schemes provide electricity for around 35,000 Otago households and thus are an important resource for the region. It is considered appropriate that the significance of these assets is specifically referred in the vision for the Taieri FMU. Also clause (3) of the objective refers to 'tussock areas'. This reference is unclear but in the context of the objective it is assumed that this relates to tussock areas connected to wetlands. This should be clarified.	Add the following clause to LF – VM – O4 Taieri FMU vision: **(9) the national and regional significance of the Deep Stream, Waipori and Paerau / Patearoa hydro-electric power schemes are recognised.** Amend clause (3) to read: (3) healthy wetlands are restored in the upper and lower catchment wetland complexes, including the Waipori/Waihola Wetlands, Tunaheketaka/Lake Taieri, scroll plain, and **connected** tussock areas,
Policy LF–FW–P7 – Fresh water	Support in part	The NPS – FM addresses fish passage in Section 3.26 and acknowledges that there may be circumstances where the provision of fish passage may not be required. An example of this is where enabling fish passage could lead to impacts on native species. Manawa requests that the policy is amended to reflect this issue, as it is directly relevant to some situations where Manawa assets benefit endangered species by blocking the passage of predator species. This recognition at the RPS level will enable better development of provisions at the Water Plan level. Further, no specific recognition of the value of hydroelectricity within the region, or nationally, is made in relation to this freshwater policy. Manawa considers it fundamental that explicit recognition of renewable electricity generation and its strategic role in achieving national climate change objectives is taken into account when	Amend clause (2) to read: (2) the habitats of indigenous species associated with water bodies are protected, including by providing for fish passage **where appropriate**, Insert an additional clause, as clause (5) with associated renumbering of subsequent clauses, as follows: **(5) the existing and future generation output of hydroelectric power schemes is recognised, maintained and protected, and**

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		setting environmental outcomes limits and attribute states; and to ensure consistency with the provisions of the NPS – REG. A lack of recognition of this use and connection at the RPS level and in terms of integrated management of resources, will undermine future processes.	
Policy LF–FW–P9 – Protecting natural wetlands	Support in part	The terminology used in the policy is inconsistent with that used in the remainder of the pRPS as it relates to 'specified' infrastructure. Manawa requests that this is amended to ensure clarity and consistency within the document.	Correct clause (1)(a)(vi) as follows: (vi) the maintenance ~~of~~ **and** operation of ~~specific~~ **specified** infrastructure, or other infrastructure,
Policy LF–FW–P10 – Restoring natural wetlands	Support in part	Manawa acknowledges the direction of the NPS – FM and NES – F in relation to wetlands, however Manawa considers that recognition is required that in some cases that restoration of the 'original' processes may not be feasible and may result in unforeseen effects. The potential for some activities to occur in wetlands is clearly anticipated by the NPS-FM and NES-F which provide explicitly for activities such as specified infrastructure.	Amend the policy as follows: Improve the ecosystem health, hydrological functioning, water quality and extent of natural wetlands that have been degraded or lost by requiring, where ~~possible~~ **practicable**: …
Method LF–FW–M6 – Regional plans	Support in part	Manawa supports the recognition of role of water in the provision of essential needs, however, considers that this recognition should be extended to specifically refer to the recognition of water utilised for the provision of lifeline utilities. Further it is considered that amendments should be made to the method to ensure consistency with other relief sought in this submission.	Amend clauses (4) and (5) as follows: (4) include environmental flow and level regimes for water bodies (including groundwater) that give effect to Te Mana o te Wai and provide for: … (f) community drinking water supplies, and **(g) the generation of hydroelectricity, and** (5) include limits on resource use that: (a) differentiate between types of uses, including drinking water, **water for renewable**

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			electricity generation, and social, cultural and economic uses, in order to provide long-term certainty in relation to those uses of available water, … (c) ~~control the effects of~~ **enable** existing and potential future development **where the effects of this** on the ability of the water body to meet, or continue to meet, environmental outcomes **are managed in accordance with the effects management hierarchy**, …