**Before a panel appointed under the Fast-Track Approvals Act 2024** **FTAA-2510-1120**

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| **UNDER:** | the Fast-track Approvals Act 2024 (**Act**) |
| **IN THE MATTER:** | an application for approvals for the Lake Pūkaki Hydro Storage and Dam Resilience Works |
| **BY:** | **MERIDIAN ENERGY LIMITED**<br>**Applicant** |

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# STATEMENT OF EVIDENCE OF RORY BLUNDELL ON BEHALF OF MERIDIAN ENERGY LIMITED

**Draft Conditions**
Dated: 19 June 2026

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## INTRODUCTION AND CODE OF CONDUCT

1 My full name is Rory Peter Blundell.

2 I am the General Manager of Strategy and Portfolio at Meridian Energy Limited. I have previously provided a statement of evidence dated 15 April 2026 in relation to the Lake Pukaki Fast-track Project. I confirm that my role and previous statement regarding my experience, expertise and the expert code of conduct continue to apply.

3 I have provided a response to issues raised by the draft consent conditions provided by the Panel and comments made by the Department of Conservation (DOC) and Genesis Energy Limited (Genesis), where these issues relate to my responsibilities and experience.

## RESPONSE TO DRAFT CONDITIONS FROM THE PANEL AND COMMENTS ON DRAFT CONDITIONS

4 In this evidence, I address the following matters:

a. The consent expiry date proposed by the Panel for the lake operating consent

b. A condition requested by Genesis that would limit lake lowering below 518 masl to only occur during the months of June, July, August 2026, 2027 or 2028 or when it is necessary to undertake the repair, remediation and maintenance works associated with the Tekapo tailrace.

c. New lake operating regime conditions requested by DOC

## CONSENT EXPIRY DATE AND GENESIS ENERGY WINTER ONLY CONDITION

5 In my statement of evidence dated 15 April, at paragraphs 33 to 37 related to the SOSFIP, I discuss why if access to water is not certain, then operationally it cannot be relied upon as being available. A similar issue arises with respect to the draft conditions of resource consent CRC262540 for the proposed expiry date and attempts to limit use of the lake range to only three months of each of the three years that the application relates to.

6 In its draft decision, the Panel has largely adopted proposed conditions for access to water in Lake Pūkaki below 518 masl, as put forward by Meridian Energy in its application.

7 However, draft condition 1 has been added by the Panel and is, in my opinion, problematic:

*This consent will expire on 1 September 2028, unless surrendered or cancelled at an earlier date.*

Genesis in their comments have supported the early expiry date and provided additional edits on the draft conditions, limiting the use of the consent to only three months of each of the three years applied for, requesting the following condition:

*Lowering Lake Pukaki below 518.0 m RL to a minimum of 513.0 m RL under this consent is authorised:*

*a. Only during the months of June, July, August 2026, 2027 or 2028*

8 In my opinion it would be more appropriate for the consent expiry date to be 31 December 2028, as detailed in the Substantive Application.

9 In practice, and as I explain in more detail below, an expiry date on 1 September 2028 will mean the consent will not be able to be exercised during winter 2028.

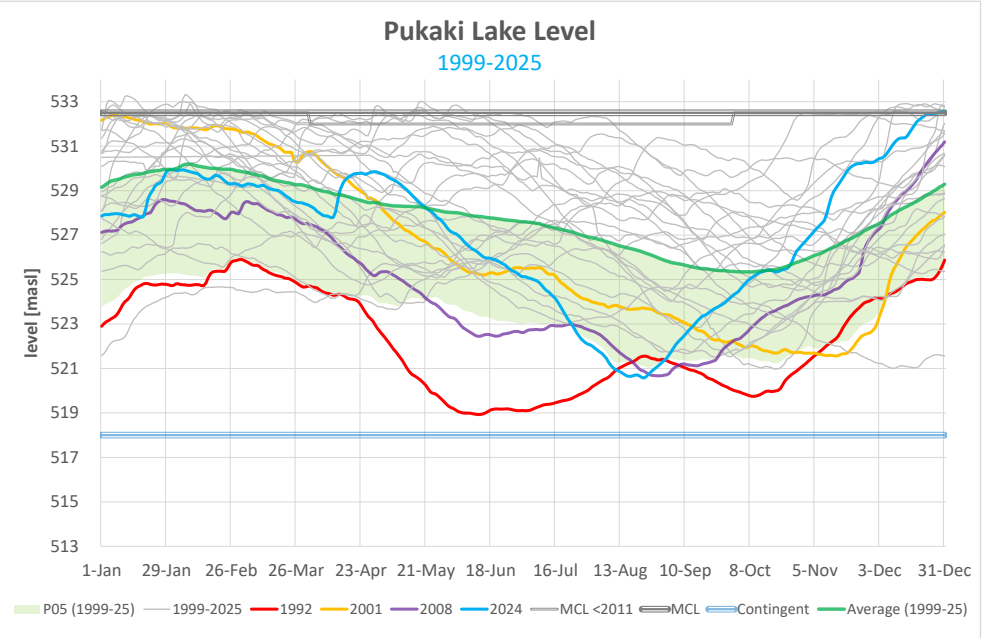
10 The Genesis proposal to restrict use to June–August is fundamentally impractical. If consent conditions require that the range below 518 masl is not allowed to be used until 1 June, lake levels must be conservatively managed in the preceding months to ensure they remain above 518 masl. Similarly, levels must be managed to ensure compliance above 518 masl by 1 September. In practice, hydrological uncertainty and variability, particularly approaching the start and end of the period, mean these constraints would materially limit the ability to utilise the range. As a result, the proposed condition would significantly constrain operational flexibility and undermine the benefits the proposal is intended to deliver.

11 In addition, I note that Meridian's modelling and associated economic benefits were based on utilisation of a year-round authorisation and a 31 December 2028 expiry date. If Meridian cannot rely on the consent in 2028, the full economic and environmental benefits outlined in the Substantive Application would not be realised.

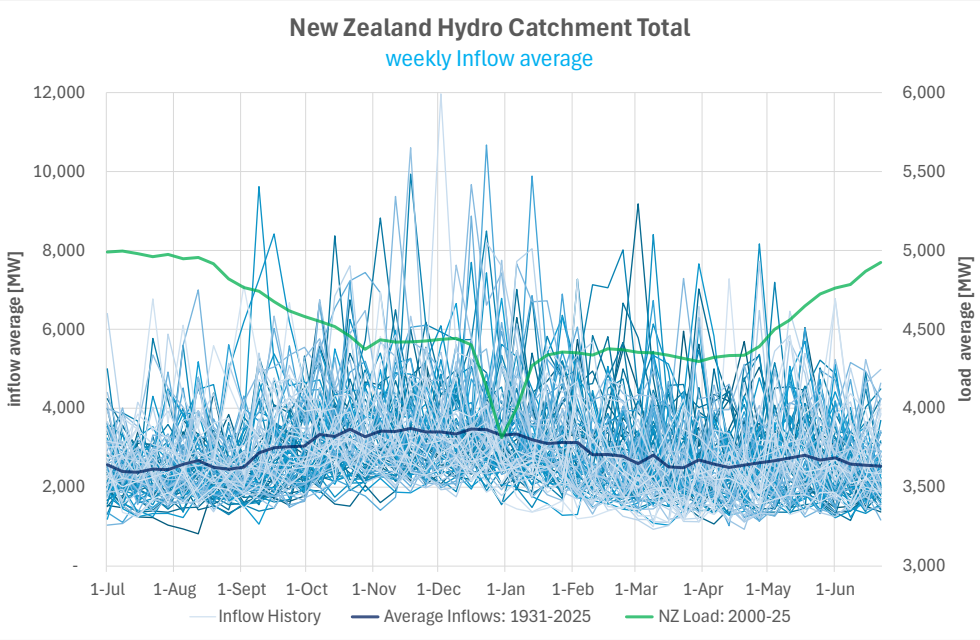
12 Because of the inherent uncertainty of future hydrology, if the lake level was drawn below 518 masl in the months prior to 1 September 2028, Meridian operators could not be certain that lake levels would be able to recover back above 518 masl by 1 September, therefore creating a serious non-compliance risk. This is very similar to the previously problematic Lake Tekapo 'shadow constraint'. It is also similar in nature to one of the problems Meridian outlined in its original application for eased access to Lake Pūkaki: the inability to know in advance whether future access conditions can be complied with must inevitably result in operational conservatism in storage management across the entirety of the year.

13 This operational concern is primarily driven by two features of reservoir management that I would draw to the Panel's attention:

a. Following an extended period of low inflows, hydro reservoirs historically reach their lowest levels in late August to early September, as shown for Lake Pūkaki in the chart below. It is precisely at this point that, should low inflows persist, operators look to draw storage down into the lower reaches of the lake. If the original operational access conditions resume on 1 September 2028, then because reservoir operators cannot be sure in advance whether or when spring inflows will materialise or not, they will need to set storage up early in 2028 *as if* the eased access below 518 masl provided for in the new consent is not available for the entirety of 2028.



b. Reservoir management in New Zealand is inherently challenging. This challenge reflects a geographically isolated, narrow, mountainous country that is exposed to unpredictable South Pacific weather patterns with only modestly-sized alpine lakes used to store water for hydro generation. A major challenge then, is that inflows into hydro catchments are variable, both in their timing and their volume. In any given year hydro inflows can swing markedly below or above the long-run average. The arrival of inflows within the year is also unpredictable – the bulk of southern inflows, "spring inflows", arrive sometime between September and January, coinciding with the melting of the snowpack in the Southern Alps. Spring inflows typically reset the southern lake levels each year sometime over summer and arrive at a time when demand for electricity is lowest (relative to winter demand). South Island inflows, in particular, peak at precisely the time of lowest demand on the system, over the Christmas–New Year period, when the power system is least stressed. The figure below shows weekly inflow patterns over a hydrological year for 94 years of historic data (in blue). The volatility is evident in the graph and is even stronger at a daily resolution, as is the anticorrelation to seasonality of national load (in green).




14 Weather in New Zealand has a significant influence on many parts of the economy, power being no exception. Hydro power can experience large and unpredictable variations in inflows into hydro catchments ranging from 80% to 140% of the current 25TWh annual average. Hydro storage only contains a few months of water at best, so careful management of scarce resources is

needed to avoid wasting water (“spill”) on the one hand, and to avoid running out of water, which can lead to involuntary system demand management (“shortage”), on the other. The first results in unnecessary use of expensive back-up generation – typically hydrocarbon emitting fuels – while the second requires rationing power consumption, causing significant economic damage and inconvenience to the public – the very thing Meridian’s eased access proposal is aimed at addressing.

15 Additionally, medium-term inflow serial correlation is weak, meaning that recent inflow events cannot be used to predict future inflow patterns. Similarly, seasonal forecasting methods can show some limited success but typically add only modest information and are not regularly used.

16 These features of reservoir management lead to the inevitable conclusion that lake levels in advance of 1 September 2028 are unknowable. Consequently, operational management must reflect this, meaning that a consent that ends on 1 September 2028 will mean that during all of 2028, the eased access consent will not be able to be used in reality.

17 The additional 4 months of the consent term to 31 December 2028, allows sufficient time during the expected "spring inflow" season, combined with lower summer seasonal demand for power, to give reservoir operators confidence that they will be able to achieve 518 masl by 31 December 2028, if the lake is below that level in, or even at the end, of winter 2028. The combined characteristics of New Zealand hydrology and seasonal demand mean that a natural time to reset contingent lake access conditions below 518 masl at Lake Pūkaki is on 31 December 2028. This ensures that the benefits of eased access to contingent storage are available through 2028.

**TEKAPO B WEIR PREPARATORY WORK**

18 Draft Panel conditions require preparatory work on the Tekapo Weir to be completed within 12 months of the grant of consent. This may not be possible if market and hydrology conditions prevent that from occurring before 3 July 2027.

19 Meridian maintains a strong “best for New Zealand” perspective on how to use stored water in its reservoirs from year-to-year and within a year. This is a dynamic assessment that takes account of the highly uncertain hydrology, referred to above, along with an assessment of wider supply and demand

conditions in the power market. Reflecting firm commercial and regulatory risk management, Meridian will always use its water prudently. Put simply, Meridian does not take actions that risk running storage lakes low and risking system shortage, unless it is in response to a serious run of poor hydrology and/or other challenging market conditions. This is demonstrably true historically and will not change in response to altered access to discretionary storage in Lake Pūkaki.

20 In line with the Tekapo Weir draft condition, there may be an expectation that Meridian will "drain the lake" in 2027 so that we can engage in necessary engineering work. This is inconsistent with how Meridian manages its reservoir operation. As with the approach taken to armouring the shore of Lake Pūkaki at low levels of operation, Meridian would never "drain the lake" just so engineering works could be undertaken. This would not be sensible.

21 Instead, Meridian is hoping to secure a change in the draft consent conditions so that we are not required to do the work on the weir in the first 12 months. Instead, a dynamic and incremental approach to the engineering work can be considered, as and when hydrological and market conditions allow, always in the best interests of consumers.

## DEPARTMENT OF CONSERVATION (DOC) REQUEST FOR NEW LAKE OPERATING REGIME CONDITIONS

22 DOC has again suggested new operating regime conditions in the main operating range of Lake Pūkaki in their comments on the Panel's draft consent conditions. DOC's proposed conditions are detailed below in red.

*New conditions on lake levels*

I. *The main operating range, within which the consent holder must endeavour to maintain continuous variation, is 525.0 m RL to 531.0 m RL.*

II. *The consent holder must endeavour to achieve an annual mean level within the main operating range.*

III. *Lake levels may only be drawn below 518.0 m RL for a maximum of 39 consecutive calendar days.*

IV. *There must be a minimum interval of 240 calendar days between each drawdown below 518m.*

23 I understand from counsel that these suggested conditions are not within the scope of Meridian's proposal. But even if these *were* considered somehow in scope as conditions, they are operationally unworkable and are completely at odds with the intent of the Fast-track proposal. To give a sense of what is proposed, I have attached at Appendix A, a schematic diagram representing

the operating range of Lake Pūkaki, showing via two superimposed red lines, the lake levels that the DOC proposed condition would require. This condition would not only make utilising the consent that the current application relates to impossible, it would also sterilise approximately half of the normal range of the lake.

24 Meridian's Fast-track application is focused on enabling access to Lake Pūkaki below 518 masl without otherwise prevailing triggers. Operational storage in the Lake above 518 masl is subject to the wider suite of resource consents that have recently been granted by the Environment Court on the same terms as applied over the previous 35 years. Lake Pūkaki can and will continue to be prudently managed between 518 masl and 532.5 masl by Meridian in the best interests of consumers, subject only to all the usual commercial and regulatory checks and balances. Meridian's ability to operate in this way is fundamental to the effective operation of the Waitaki Power Scheme, and its vital contribution to New Zealand's electricity system. Even if DOC's suggested conditions were considered, then as outlined above, the volatile and unforecastable nature of hydro catchment inflows combined with the uncertain needs of power market supply make managing Lake Pūkaki in the manner that DOC suggests completely impractical. DOC appears to be seeking to impose a form of lake management to Lake Pūkaki, that is in place within the Waiau catchment, which is subject to its own Act of Parliament and is managed via a bespoke governance regime and where Lakes Te Anau and Manapōuri sit within the Fiordland National Park. The objective in the Waiau catchment is explicitly to protect existing natural values of the two lakes (Manapōuri and Te Anau). In contrast, Lake Pūkaki is already a highly modified lake, with a high dam that raised the lake level above the earlier low dam. Lake Pūkaki is in no way a natural lake and its ordinary approved extent of variability is 14.5 metres. Lake Pūkaki also receives modified inflows from Lake Tekapō, which would not naturally have occurred. Attempting to retrospectively impose a pseudo natural storage regime at Lake Pūkaki makes little sense, both because it is such a highly modified environment, and because of the critical role the reservoir plays as the largest storage reservoir in the New Zealand electricity system.

25 Finally, if such conditions were to be imposed on Lake Pūkaki, its ability to regulate water as stored energy within the power system would be significantly compromised - within the day, from day-to-day, between seasons, as an ancillary service, and in dry years. Reflecting its role as the largest hydro

reservoir in the country, the loss of the ability to store water as energy for when it is needed most in the power system would come with significant cost if permanent, measured in the billions of dollars, of lost power system flexibility. Without effective operational storage, seasonal shifting, and associated flexibility, Lake Pūkaki storage becomes a glorified run-of-river smoothing mechanism that can capture high rainfall events and little more.

26 Lake Pūkaki seasonality, storage, and flexibility, if lost permanently, would have to be replicated with new capital and additional resource intensive projects elsewhere in the country, all of which comes at a cost to consumers, along with implications for security and carbon emissions. There is no free lunch, and some other community in New Zealand would have to sacrifice some of their own local natural and amenity value in an attempt to replace Lake Pūkaki's unique power system attributes. The difficulty of doing this and the cost of it are both expected to grow over time as more intermittent wind and solar generation are build, and carbon emitting thermal generation is retired, creating an even stronger need for flexibility, seasonal management, and deep storage.

27 Even if we only consider the time bound nature of Meridian's Fast-track consent which expires at the end of 2028, then additional costs to consumers still result from DOC's conditions. DOC's suggested conditions would significantly impair the existing and critical ability to manage the level of Lake Pūkaki within its normal operating range for the benefit of New Zealanders for the term of the Fast-track consent. That impairment would be at such a scale that Meridian would not exercise the Fast-track consent and all the benefits of the current proposal would be foregone.

**Dated: 19 June 2026**

R Blundell

**RORY BLUNDELL**

**Appendix A – Schematic of Lake Pūkaki Storage Ranges with Department of Conservation Lake Level Target Proposal Overlaid.**