PO Box 489, Dunedin 9054
s 9(2)(a)

Reference: MDL002405

29 September 2025

Ministry for the Environment
c/- Ilana Miller
General Manager, Delivery Operations
PO Box 10362
Wellington 6143

Dear Ms Miller

RE: Request for further information on application for referral of the Clutha Hydro Scheme Project under the Fast-track Approvals Act 2024

Thank you for your letter received 15 September 2025 requesting further information regarding Contact Energy Limited's ("**Contact**") referral application for the Clutha Hydro Scheme – Increasing Flexibility and Security of Electricity Supply Project ("**the Project**"). This letter outlines Contact's response to the further information request and also outlines amendments to the description of the Project Contact is seeking to be referred under the Fast-track Approvals Act 2024 ("**FTAA**").

Amendments to the Project Description

The Project as described in the referral application submitted by Contact on 30 June 2025, sought new consents to enable:

- Lowering the normal operating range of Lake Hāwea to 336 metres above sea level ("**masl**"); and
- Lowering the level of the lake during defined contingent storage events (as determined by Transpower as the System Operator) to:
  - 333 masl at 4% Electricity Risk Curve ("**ERC**") (the Alert Level); and
  - 330 masl at 8% ERC.

Since Contact submitted its referral application for the Project, it has made considerable advancements in preparing its substantive application. This progress includes further technical work aimed at assessing the impacts of the proposed activities. Such work has involved modelling efforts to enhance understanding of future electricity generation and demand in New Zealand, along with the role of the Clutha Hydro Scheme in fulfilling the nation's electricity requirements.

The modelling outcomes have indicated that if Contact were to lower the lake to the proposed contingent storage level of 330 masl, there exists a risk that the lake may not adequately refill by the subsequent winter. This scenario poses potential risks to the operation of the Clutha Hydro Scheme and, by extension, the stability of New Zealand's electricity market.

Additionally, ongoing engagement with the local councils and community has highlighted concerns regarding potential dust and groundwater effects (also discussed further below), aspects that will be further investigated as part of the substantive application. However, Contact has considered the concerns raised and the results of the modelling conducted, and is now seeking to amend the description for the Project for which it is pursuing a referral under the FTAA to facilitate the following:

> Lowering the normal operating range of Lake Hāwea to 336 masl; and

> Lowering the level of the lake during defined contingent storage events (as determined by Transpower as the System Operator) to **334 masl**.

The change from the Project as described in the initial referral application is therefore a change to the proposed contingent storage lake level. The change to the Project is a reduction from (and not an expansion of) the Project that was sought in the initial referral application, and therefore, is within the scope of the referral application.

For clarity, the existing consented levels, previously proposed levels in the initial referral application and new proposed levels for which Contact is seeking referral for are summarised in **Table 1** below.

Table 1: Summary of the existing consented, initial referral application (30 June 2025) and new referral application levels of Lake Hāwea.

	Consented Level	**Initial Referral Level**	**New Referral Level**
Operating Range	338 masl – 346 masl	336 masl – 346 masl	336 masl – 346 masl
Contingency Storage	336 masl – 338 masl at 4% ERC	333 masl – 336 masl at 4% ERC	334 masl – 336 masl at 4% ERC
Contingency Storage	N/A	330 masl – 333 masl at 8% ERC	N/A

The modifications to the Project will result in a reduction of its potential effects. The Project will provide Contact with access to an additional 2m of hydro storage during standard operating conditions, as well as continued access to an additional 2m of contingent storage. This contingent storage can be utilised during emergencies or crises related to electricity supply. Collectively, these enhancements will contribute to the overall security of New Zealand's electricity supply. The proposed change to the normal operating level will provide up to an additional 67GWh of renewable electricity generation (or an approximate 24% increase of the current generation capacity of the Clutha Hydro Scheme), which is sufficient electricity to power up to approximately 10,000 homes for one year (or an additional approximate 40,000 households through a dry year), with no added emissions.[1] In addition, the Project will assist in mitigating foreshore erosion, as the increased access to storage will reduce the amount of time the lake is at or near its fullest level (346 masl), which is when the impact of foreshore erosion along Lake Hāwea is most pronounced. Further, the increased range of storage in Lake Hāwea will also provide a buffer for downstream flooding.

Prior to 2007, the previous lowest contingent storage level was 330 masl. Given the historical context and the urgency of progressing this application before winter 2026, 330 masl was used as the lowest level for the application. Contact has, however, always explained that it is exploring the various level opportunities. Further modelling now indicates that the incremental benefit of 6m of contingent storage is minimal due to the low daily utilisation rate and the potential risks it poses in the subsequent winter, particularly the possibility that the lake may not replenish. If the lake does not replenish, the Clutha Hydro Scheme has reduced storage for the following year, adding additional risk. In contrast, providing an ongoing 2m of contingent storage, which is beyond normal operating levels for the lake, continues to offer ongoing adequate 'insurance' for the market during unforeseen events while ensuring that the lake's levels are maintained sufficiently to generate electricity in the following winter, thereby supporting the overall security of New Zealand's electricity supply.

Response to Further Information Requested

Please refer to the below for Contact's response to the further information requested.

1. *The application proposes new consents to enable the minimum level of Lake Hāwea to be lowered to 333 masl at 4% ERC and 330 masl at 8% ERC during low storage contingency events, to be used solely during emergency or crisis situations regarding electricity supply. Please confirm if accessing this additional contingent storage in such situations (as defined by Transpower) could occur under the current consent conditions including powers available under section 330 of the Resource Management Act 1991(RMA).*

[1] It is noted that these figures are approximate and indicative and will be dependent on electricity demand year to year and season to season.

It is noted that the revised Project described above now proposes lowering the level of the lake to 334 masl during defined contingent events. However, the response below is still relevant to Contact's ability to access this contingent storage in response to this question.

The existing consent held by Contact to dam Lake Hāwea (Consent No. 2001.383, attached as **Attachment 1** to this response) includes conditions that specify the allowable levels that Contact must operate Lake Hāwea within. This includes:

- Condition 9(a) which requires that the normal maximum operating level for Lake Hāwea must not exceed 346 masl;
- Condition 9(b) which requires that the normal minimum operating level for Lake Hāwea must not decrease below 338 masl, except as required to ensure dam safety or when the Electricity Commission (now Transpower) determines that reserve generation capacity should generate electricity; and
- Condition 9(d) which requires that the lake level shall not decrease below 336 masl at any time.

Therefore, under the current consent conditions (Condition 9(d) in particular) Contact cannot lower the level of Lake Hāwea below 336 masl at any time, even when contingent storage is required to be utilised to generate electricity when the electricity system is under stress, as defined by Transpower. There are no other consent conditions which permit lowering the level of the lake included in any of Contact's consents relating to the operation of the Clutha Hydro Scheme. As such, Contact cannot lower the lake to the proposed contingent storage level (now revised to 334 masl) under its existing consent conditions.

Furthermore, in regard to the use of the powers available under s 330 of the Resource Management Act 1991 ("**RMA**"), it is noted that the 'emergency works' powers in s 330 of the RMA are only available in specific and very limited circumstances.[2] Accessing additional contingent storage goes beyond what is envisaged by s 330. Further, to be clear, the Project also involves a lower operating level which, for the avoidance of doubt, also sits beyond what is envisaged by s 330.

[2] See *Auckland City Council v Minister for the Environment* (1999) 5 ELRNZ 1 (EnvC) at 15–16: "Because of [s 330's] specifically defined circumstances of applicability ... local authorities and others should not forsake or compromise their responsibilities under the [RMA's] wider framework of regional and district planning and control on a footing that s.330 is "always available if things go wrong." Important though [s 330] is, its terms are such that it cannot be viewed as an ultimate resort for every contingency."

Section 330(1)(ca) is relevant[3] as the Clutha Hydro Scheme is operated by Contact, a lifeline utility.[4] However, it would be unreasonable for Contact, acting objectively in the circumstances,[5] to hold an opinion that the Clutha Hydro Scheme is affected by, or likely to be affected by, either of the following such that additional contingent storage can be accessed:

> An adverse effect on the environment requiring immediate preventative or remedial measures;[6] or

> A sudden event causing or likely to cause loss of life, injury, or serious damage to property.[7]

Section 330 is not available as:

> There is no adverse effect on the Clutha Hydro Scheme itself. Section 330 is concerned with events that could affect the operation of the Clutha Hydro Scheme directly, not the indirect effects on the broader community if there is not enough electricity generated;

> Immediate preventative or remedial measures are not required, in the sense envisaged by s 330.[8] The fact that Contact is seeking these changes is the antithesis to emergency works: Contact wants to avoid an emergency occurring; and

> The ERC is calculated by Transpower, and the need to access contingent storage is unlikely to be a sudden event. Section 330 is available to enable a response to sudden events such as floods.

The structure of the RMA, and New Zealand's electricity system, is that outcomes can be contemplated and planned for; that is what should occur, as opposed to relying on s 330 as the 'ambulance at the bottom of the cliff'. Transpower, as the system operator, incorporates consented allocations into its predictions. It does not factor into its system predictions the possibility that a consent holder could exceed the limits set within its consents. Indeed, in the past, when dry years have occurred, the Government of the day has taken a system-wide approach and examined regulations that apply broadly, rather than an individual scheme-by-scheme, ad hoc approach.

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3 Sections 330(1)(a)–(c) are not relevant: the Project is not a public work; Contact is not a local authority or consent authority; and Contact is only a requiring authority for certain circumstances (not relevant to the Project).

4 RMA, s 330(5) and Civil Defence Emergency Management Act 2002, s 4 definition of 'lifeline utility' and sch 1 pt B. Contact generates electricity for distribution through the operation of the Clutha Hydro Scheme.

5 *Auckland City Council v Minister for the Environment* (1999) 5 ELRNZ 1 (EnvC) at 11.

6 RMA, s 330(1)(d)–(e).

7 RMA, s 330(1)(f).

8 See *Auckland City Council v Minister for the Environment* (1999) 5 ELRNZ 1 (EnvC) at 10 – 11: "... the adverse effect in question must be of a kind as to require not only preventive measures or remedial measures, but also the immediate carrying out of such measures. The words used are strong in their tenor, embracing as they do both a mandatory factor ("require") and the factor of immediacy... The nature of the effect and its adversity must be commensurate with the type of situation predicated by the mandatory and immediacy factors ...."

Finally, but importantly, the control by Transpower to access contingent storage is designed to avoid a system emergency rather than wait for one to occur before it is accessed.

2. *In your letter to the Ministry for the Environment dated 10 July 2025, it is stated that the project could not be enabled by seeking variations under section 127 of the RMA. Please make clear why Contact Energy is seeking a variation under the Act to remove reference to the minimum lake levels and return period in current consent Condition 9, rather than lodging an application under the Act for a new resource consent to dam Lake Hāwea in its entirety.*

The two primary aspects of the existing consent Contact holds to dam Lake Hāwea are the conditions relating to the maximum and minimum normal operating levels of Lake Hāwea, described above. Contact is not seeking to change the maximum allowable lake level as part of the Project, and as such, is not seeking to reconsent the entirety of the existing consent it holds to dam Lake Hāwea.

Contact considers it is not necessary or appropriate to re-consent activities for which it already holds consent for, and which have a duration to enable operations until 2042. Nor is it necessary to seek new consents to make wholesale changes to the current operating levels of Lake Hāwea. Instead, the current proposal is to vary the conditions of the existing consents only to the extent that is necessary to complement a new consent whose express purpose is to enable access to an additional 2m of storage within the lake under normal operating conditions and an additional 2m of contingent storage within the lake in the limited circumstances referred to above. If Contact were to request a completely new consent to allow the damming of Lake Hāwea, it would be necessary to assess the environmental effects of the entire activity. This would necessitate additional evaluations of the effects related to activities for which Contact already holds consent, and which remain fit for purpose. Such an approach is unnecessary and inefficient. Also of note is that continuing to use an existing dam structure is permitted under the Regional Plan: Water for Otago. This means that technically, no consent is necessary for the dam itself; any required approvals would pertain only to the operation of the lake in any event.

Contact considers it is more appropriate to retain the existing consent it currently holds (and most of the associated conditions), with changes only made to those conditions to the extent that is necessary to complement a new consent whose express purpose is to enable access to additional operational and contingent storage within the lake.

It is noted that the Otago Regional Council ("**ORC**") has suggested that the approach proposed in Contact's referral application is "unorthodox." However, it is considered that this characterisation is inaccurate, as the approach being proposed is in fact consistent with other consents that have been sought and granted for modifications to operating levels in other hydroelectric lakes throughout the country. For example, in 2018, Meridian Energy applied for an

additional consent to regulate Lake Pukaki's water levels between 515 and 518 metres above mean sea level. This was issued by Canterbury Regional Council as a stand-alone consent (CRC185833), in addition to all other approvals Meridian Energy already held for damming Lake Pukaki and operating the Waitaki Hydroelectric Scheme. Moreover, a recent application made by Meridian Energy has been accepted as being eligible to utilise the FTAA, which would further authorise temporary modifications to the operational levels of Lake Pukaki, allowing operations between 518 and 513 metres above mean sea level for similar contingent storage purposes to what Contact is proposing. This, too, would appear to be a consent that sits alongside, or in addition to, other existing approvals to dam and operate the hydro lake. Contact's approach is, in fact, quite orthodox.

Given the above, Contact considers seeking a new consent to provide for a lower allowable level of Lake Hāwea, and varying the conditions of the existing consent it holds to dam Lake Hāwea only to the extent necessary to facilitate the changed operating regime, is the most appropriate consenting pathway to authorise the Project. It is intended that the new consent will be exercised in conjunction with the existing consent. The proposed changes to the existing consent will ensure there is no conflict between the conditions and they can be clearly complied with by Contact and enforced by the ORC.

Contact fully anticipates that, if granted, the new consent will only permit the lowering of the lake, and it expects that suitable conditions of consent will be put in place that outline any necessary mitigation and monitoring actions specifically required when exercising this particular consent. These actions will be specific to this application and in addition to the obligations already established in Contact's existing consents. Contact intends to continue to work with the ORC during the preparation of the substantive application for the Project to ensure the proposed conditions on both the new consent and the existing consent are appropriate, that they are clear, and that they are readily able to be administered.

3. *The intent of the project to operate lower lake levels poses a risk to the functioning of the Hāwea aquifer - the primary source for domestic and town water supply (including the supply of clean drinking water), irrigation and for sustaining regionally significant wetlands. Should the project be referred, please confirm how Contact Energy intends to monitor and, if necessary, mitigate these risks.*

   It is noted that Contact's revised Project described above will reduce the potential effect of the Project on the functioning of the Hāwea aquifer. The changes to the scope of the Project have also been informed by the concerns raised by the local councils and community on this issue.

Contact consulted with the ORC and Queenstown Lakes District Council ("**QLDC**") during the preparation of the referral application for the Project. During this consultation, Contact was informed by the ORC of groundwater modelling previously undertaken, which shows a potential link between the level of Lake Hāwea and groundwater levels in the Hāwea aquifer. In addition, QLDC informed Contact of its existing groundwater take in the Hāwea aquifer, which provides water supply to the Hāwea township, and its potential need to increase its water take to meet demand in the future.

Contact acknowledges the community's concerns regarding the environmental and social impacts of the Project. Several key issues have been raised in feedback, including dust, ecological effects such as fish spawning and habitat disruption, potential impacts on recreational use of Lake Hāwea, and questions about the lake's hydrological connection to the underlying aquifers. There are also worries that changes to the lake's operating range could affect domestic, irrigation, and stock water usage, particularly for bore users.

During the referral stage, Contact has engaged with key stakeholders, including the Guardians of Lake Hāwea, members of the Hāwea Community Association, Hāwea Irrigation Company, Devon Dairies, Hāwea Flat Bore Holders, Hāwea Flat Primary School, Upper Clutha Anglers, and local station owners around Lake Hāwea. Contact remains committed to listening to community perspectives and engaging constructively as the Project progresses.

Contact is therefore well informed about the potential effects associated with the Project on groundwater supply and is committed to identifying the extent of such effects, properly assessing these effects and ensuring that any effects of the nature identified in the question above are properly managed. We note for completeness that this matter was identified in the referral application.[9]

It is also pertinent to note that the Project involves lowering the lake level to 336 masl during normal operating conditions, and only during times when contingent storage is required will the lake be lowered below this, to the newly proposed contingent storage level of 334 masl. This reduction will only occur in response to severe electricity supply events. Such lowering of lake levels will likely be very infrequent. This is shown in **Figure 1** below, which shows the modelled storage levels of the lake for the year 2027. The average historical storage trajectory for Lake Hāwea is depicted in red and contrasted to the forecast storage trajectory in blue, with the associated distribution of possible trajectories under wet through to dry hydro inflows. This forecast assumes an increased operating range of 10m (336 masl to 346 masl).

[9] Section 3.5.1.4, Attachment 1, Contact Energy Limited, Clutha Hydro Scheme – Increasing Flexibility and Security of Electricity Supply, Fast-track Approvals Referral Application, 30 June 2025.

Additionally, a report commissioned by ORC recommends the lake level remains above 333 masl as this will likely not result in a loss of connection between the lake and the aquifer.[10] This will be further investigated and understood through further assessment, as discussed further below.

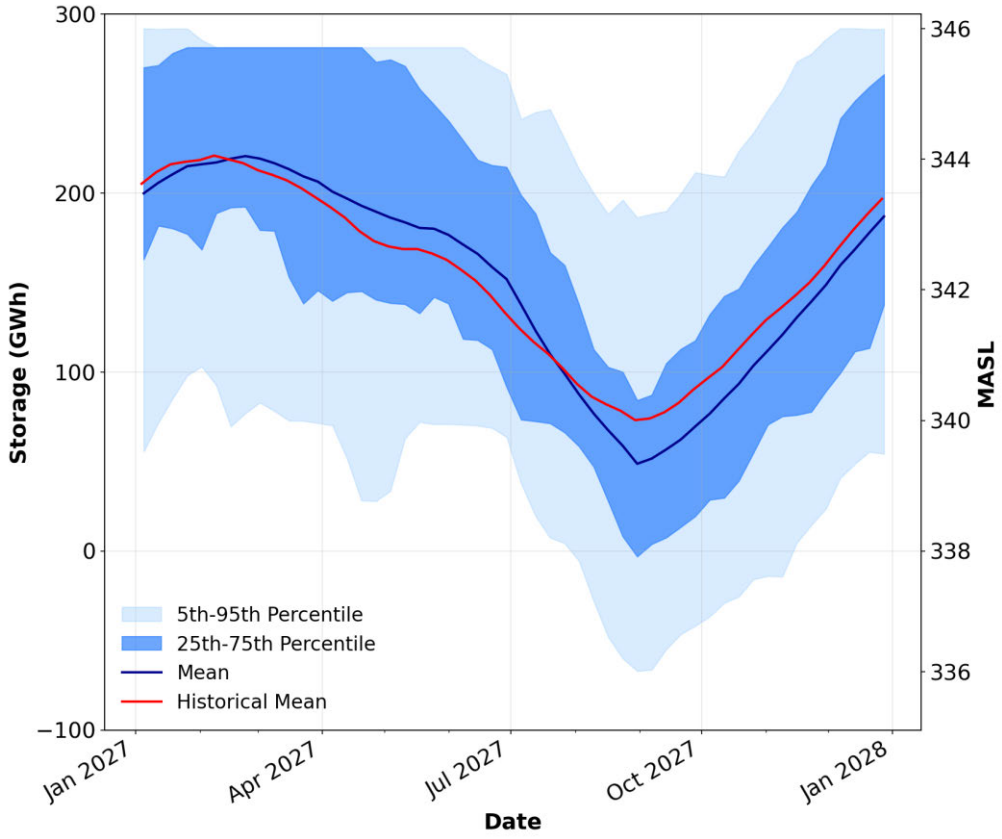

Figure 1: Forecast storage trajectory over 12 months for Lake Hāwea.

As part of the preparations necessary to support a substantive application under the FTAA Contact will, of course, engage a suitably qualified and experienced groundwater expert to:

> Prepare an independent assessment of the effects of the Project on groundwater; and

> Identify measures that Contact should implement to monitor and mitigate any risks to the availability of groundwater in the Hāwea aquifer.

The FTAA requires that a referral application provide a description of the anticipated and known effects of the Project on the environment,[11] whilst the substantive application must provide a more fulsome assessment of the effects of the Project and outline any appropriate measures that

[10] Hāwea Transient Groundwater Report - Additional Information, *Analysis of Historical Lake Hāwea Low Lake levels corresponding groundwater levels*, prepared by Matt Durmont, November 2023.

[11] Section 13(4)(h) of the FTAA.

will be implemented to manage identified effects, including any monitoring.[12] As such, the final technical assessments for the Project have not yet been completed, which is, of course, quite orthodox and aligned with the FTAA's process. The time for properly addressing these matters is within the process associated with Contact having made a substantive application. That application will include proposed conditions that demonstrate how measures recommended by Contact's technical experts can address any potential effects of the Project on groundwater supply. Whilst it is too early to form complete conclusions about potential mitigation options in this respect, options are likely to exist, including a requirement for Contact to:

- Improve affected bore performance to respond to any changes in groundwater availability; and/or
- Provide additional bores or the provision of alternative water sources during temporary lake lowering events (e.g. to the 334 masl).

4. *Please provide further information (including metrics) identifying and quantifying economic benefits the project will deliver and over what timeframe, both in the regional and national context.*

   Contact has provided this information in a separate letter attached (see **Attachment 2**), which has been included with this response.

Please do not hesitate to contact me should you require any further information or clarification regarding the above.

Yours sincerely,

Claire Hunter
Mitchell Daysh Limited

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[12] Clauses 5-7, Schedule 5 of the FTAA.

ATTACHMENT 1

Consent No. 2001.383

Consent No: 2001.383

WATER PERMIT

Pursuant to the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Contact Energy Limited

Address: Level 1, Harbour City Tower, 29 Brandon Street, Wellington

to dam Lake Hawea at the outlet to the Hawea River with an earth dam (Hawea Dam), with a crest level of 351.4 metres above datum

for the purpose of storing water in Lake Hawea

for a term expiring: 25 May 2042

Location of activity: At the outlet at the southern end of Lake Hawea

Legal description: Lot 2 DP 25173

Map reference: Centred on NZMS 260 G40:153-124

Conditions:

1. Survey Datum

All levels specified in this consent and all monitoring of levels required by this consent shall be in terms of mean sea level (Dunedin datum).

2. Compliance with Other Relevant Resource Consents

This consent shall be exercised in conjunction with, and to ensure compliance with, the following consents:

Hawea Dam

No. 2001.389 –Water Permit to Divert
No. 2001.392 – Discharge Permit
No. 2001.395 – Discharge Permit
No. 2001.399 – Water Permit to Take & Use

Gladstone Gap Stop Bank

No. 2001.384 - Water Permit to Dam

Clyde Dam

No. 2001.385 - Water Permit to Dam
No. 2001.387 - Water Permit to Divert
No. 2001.390 - Water Permit to Take and Use
No. 2001.393 - Discharge Permit
No. 2001.396 - Discharge Permit

Roxburgh Dam

No. 2001.386 – Water Permit to Dam
No. 2001.388 – Water Permit to Divert
No. 2001.391 – Water Permit to Take & Use
No. 2001.394 – Discharge Permit
No. 2001.397 – Discharge Permit
No. 2001.398 – Land Use Consent

3. Catchment Approach to Monitoring

a) The consent holder shall submit a monitoring programme to the Otago Regional Council within six months of the commencement of this consent and shall thereafter implement the same. The purpose of the programme shall be to monitor in an integrated manner, lake levels, river levels and flows required by the conditions of this consent, and to enable the consent holder to demonstrate compliance with the conditions of this consent.

b) The programme will specify procedures for monitoring lake levels and river levels and flows required by the conditions of this consent. Monitoring sites are defined in the table in condition 8.

c) The consent holder shall implement a maintenance programme to ensure the functionality and accuracy of the equipment monitoring flows and levels.

4. Annual Reporting

The consent holder shall supply the Otago Regional Council, Queenstown Lakes District Council, Central Otago District Council and Clutha District Council with an annual report by 30 June of each year. The annual report is to include:

a) The results of all monitoring data collected in compliance with this consent for the period up to and including 31 December immediately preceding the annual report;

b) An interpretation of all monitoring data in terms of resource consent compliance and non-compliance, including an assessment of any actual environmental effects which have arisen from the exercise of this consent.

5. Review

a) The Otago Regional Council may, within three months of every fifth anniversary of the commencement of this consent, in accordance with section 128 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent to:

(i) deal with any adverse effect on the environment which may arise from the exercise of this consent; and or

(ii) review the effectiveness of the conditions of this resource consent in avoiding or mitigating any adverse effects on the environment from the exercise of this resource consent and if necessary require the consent holder to avoid, remedy or mitigate such effects by way of further or amended conditions; and or

(iii) require the holder of this resource consent to adopt the best practicable option to remove or reduce adverse effects on the surrounding environment due to the exercise of this consent; and or

(iv) review the adequacy of and the necessity for monitoring undertaken by the consent holder.

b) The consent holder shall immediately advise the Otago Regional Council in the event that there arises a potential split in ownership of the Hawea Dam, Clyde Dam and/or Roxburgh Dam. Pursuant to section 128 (1) of the Resource Management Act 1991 the Otago Regional Council may then initiate a review for the purpose of ensuring coordination of consents relating to the operation of those structures.

c) The Otago Regional Council may, within three months of the first anniversary of the commencement of this consent, in accordance with section 128 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent to review the continued necessity for conditions governing dam safety in the light of enactment of a separate regulatory regime governing the safety of dams.

d) Pursuant to section 127(1) of the Resource Management Act 1991 the consent holder may apply to the Otago Regional Council for a change to or cancellation of any of the conditions of this consent (other than a condition as to duration of the consent)at any time as allowed by law.

6. Flood Management Plan

a) The consent holder shall, within six months of the commencement of this consent, prepare for approval by Otago Regional Council, a Flood Management Plan in consultation with Queenstown Lakes District Council, Central Otago District Council and Clutha District Council, identifying:

(i) Procedures the consent holder will implement to ensure continual preparedness for flood events;

(ii) Monitoring and control actions the consent holder will implement during the rising, cresting and falling limbs of floods;

(iii) Procedures the consent holder will implement for notification to interested parties of such actions; and

(iv) The manner in which the consent holder will control the storage and flow of water in the Clutha River/Mata-au catchment to mitigate the adverse effects of flooding to the extent that this is practicable through the exercise of this consent and the other consents listed in condition 2.

b) Pending approval of the Flood Management Plan prepared under condition 6 (a) of this consent, the consent holder shall exercise this consent in accordance with the Clutha Flood Rules Version 1.

c) Once the Flood Management Plan prepared under condition 6 (a) of this consent is approved, the consent holder shall exercise this consent in accordance with that management plan including approved revisions of the plan.

d) The consent holder shall reassess the effectiveness and appropriateness of the Flood Management Plan prepared under condition 6 (a) of this consent in consultation with Queenstown Lakes District Council, Central Otago District Council, Clutha District Council and Otago Regional Council no less frequently than every fifth anniversary of the commencement of this consent and also following any instantaneous flow in the Clutha River/Mata-au of greater than 2500 cubic metres per second as measured at Clyde (site 75213).

e) If the reassessment undertaken pursuant to condition 6 (d) indicates to the consent holder that changes to the Flood Management Plan are necessary or desirable, the consent holder shall revise the Flood Management Plan accordingly, for approval by Otago Regional Council.

7. Dam Safety Requirement

a) The consent holder shall ensure that the Hawea Dam and all its appurtenant components and accessory structures including the Gladstone Gap Stopbank are maintained in a safe and stable condition.

b) Safety shall be managed in accordance with the principles of the Dam Safety Guidelines issued by the New Zealand Society On Large Dams.

c) The consent holder shall provide a certificate confirming the safety of the Hawea Dam signed by an independent engineer registered under the Chartered Professional Engineers Act 2003, or the equivalent recognised international qualification, and approved by Otago Regional Council as having the relevant expertise for the purpose. The certificate shall be provided on each anniversary of the commencement of this consent or such alternative date agreed by the Otago Regional Council. The certificate provided to Otago Regional Council shall include advice as to works undertaken on the dam for the purposes of dam safety since the last certificate, and the rationale for such works.

d) An independent safety assessment of the Hawea Dam shall be carried out at intervals of not more than five years, commencing from 2006, or such greater intervals as agreed by Otago Regional Council. The assessment shall include consideration of the Gladstone Gap Stopbank and take into account current understanding of the seismicity of the area and of possible effects on flood flows and lake levels due to climate change.

e) The results of the independent safety assessment shall be reported to the Otago Regional Council, and copies sent to the Central Otago District Council, Queenstown Lakes District Council and the Clutha District Council.

f) In the event that an earthquake with an intensity of IX or greater on the Modified Mercalli scale is experienced at the Hawea Dam, an inspection and accompanying independent audit shall be carried out as soon as practicable after the earthquake. A summary report detailing the results on the inspection and audit shall be promptly provided to Otago Regional Council.

8. Water Level and Flow Recording

a) The consent holder shall maintain water level recordings and flow ratings as specified below. All data shall be made available to the Otago Regional Council, on request. All data is to be recorded at not more than 15 minute intervals.

Site Number	Site Name	Grid Reference NZMS 260:	Level Data, or Flow Rating Data required
75288	Hawea Dam*	G40:125-153	Level Data
75287	Hawea River at Camphill Bridge	G40:124-107	Level Data and Flow Rating
75282	Clutha River at Cardrona Confluence	F40:088-066	Level Data and Flow Rating
75277	Lake Wakatipu at Willow Place	F41:733-668	Level Data
75263	Kawarau at Frankton	F41:740-667	Level Data
75292	Lake Wanaka at Roys Bay	F40:037-058	Level Data

75262	Kawarau at Chards Road	F41:844-698	Level Data and Flow Rating
75276	Shotover at Bowens Peak	F41:722-710	Level Data and Flow Rating
75265	Nevis at Wentworth	F41:974-639	Level Data and Flow Rating
75268	Lake Dunstan at Ripponvale	F41:048-662	Level Data
	Lake Dunstan at Clyde Dam		Level Data
75213	Clutha River at Clyde	G42:212-502	Level Data and Flow Rating
75253	Manuherikia at Ophir	G41:418-608	Level Data and Flow Rating
75228	Clutha at Alexandra	G42:266-438	Level Data
	Roxburgh Dam		Level Data
75220	Clutha River at Roxburgh	G43:223-190	Level Data and Flow Rating

** The Hawea Dam site is to record lake levels beyond the drawdown zone of the discharge structure.*

b) The consent holder shall implement a maintenance programme to ensure the functionality and accuracy of the equipment monitoring flows and levels.

9. Lake Levels

a) The normal maximum operating level for Lake Hawea shall not exceed 346 m above datum (based on a 3 hour rolling average), as measured at the Hawea Dam site (Site No. 75288), except when a higher lake level is required either by the Clutha Flood Rules Version 1 (if still operative) or in order to implement the Flood Management Plan.

b) The normal minimum operating level for Lake Hawea shall not decrease below 338 m above datum (based on a 3 hour rolling average), as measured at the Hawea Dam site (Site No. 752 88), at any time except as required to ensure dam safety or when the Electricity Commission (or any statutory body exercising like powers and functions to the Electricity Commission) determines that reserve generation capacity (such as that currently located at Whirinaki) should generate electricity.

c) The Lake shall be returned to its minimum operating level of 338 m above datum as soon as possible after the dam safety issue is resolved or when the the Electricity Commission (or any statutory body exercising like powers and functions to the Electricity Commission) determines that operation of reserve generation capacity (such as that currently located at Whirinaki) is no longer required.

d) The lake level shall not decrease below 336 m above datum (based on a 3 hour rolling average), as measured at the Hawea Dam site (Site No. 75288), at any time.

e) Under flood flow conditions, the level of the lake shall be managed in accordance with the Clutha Flood Rules Version 1(if still operative) or the Flood Management Plan.

10. Lake Margins Monitoring Management Plan

a) Within two years of the commencement of this consent, the consent holder shall submit to the Otago Regional Council for approval, a plan covering monitoring and collection of data relating to foreshore landscape management and erosion management of the lake margin and adjacent land.

b) The Plan for monitoring and collection of data shall include provision for:

(i) Establishing and regular surveying of topographical profiles of the near shore lake bed, foreshore and relevant lake margin land around the southern end of Lake Hawea, the precise limits to be specified in the plan, but including the area adjoining Hawea Township;

(ii) Establishing inspection and/ or erosion profile measurement points at erosion prone areas of the balance of the entire lake foreshore not covered in b(i) above. Where such points are established, subsequent inspection and/ or topographical measurement shall include the foreshore and relevant lake margin land at each defined point;

(iii) Defining the extent and accuracy requirements of the profiles in (b)(i) and (b)(ii) above as well as the monitoring intervals (including after specified weather events);

(iv) Collection of sediment samples from the near shore lake bed and foreshore for grain size analyses to support assessment of sediment movement and deposition;

(v) Wind speed and wind and wave direction measurement and recording at a suitable place near the lakeshore at Lake Hawea township;

(vi) Recording of concentrations of ambient dust in the air for five years at intervals and locations specified to ensure that representative samples are collected along the southern end of the lake and immediately to the south of Lake Hawea township;

(vii) Whether there shall be control sites (e.g. at Glenorchy or in Canterbury) in respect of ambient dust quantities;

(viii) Maintenance and calibration of monitoring equipment to appropriate industry standards;

(ix) The reporting frequency and format, as agreed with the Otago Regional Council, which for the avoidance of doubt shall include:

1) An interpretation of monitoring results;

2) Summary information and/or graphs necessary to support the interpretation of results collected; and

3) Identification of responsibilities for data collection and interpretation.

c) The consent holder shall ensure that the Lake Margins Monitoring Management Plan is reassessed in consultation with the Crown, Queenstown Lakes District Council and Hawea Community Association Incorporated every five years after approval of the first Lake Margins Monitoring Management Plan and shall submit any revised Plan to the Otago Regional Council for approval within six months of the reassessment.

d) The consent holder shall be responsible for implementation of the Lake Margins Monitoring Management Plan, including approved revisions of that Plan.

11. Foreshore Landscape Management Plan

a) Within two years of the commencement of this consent, the consent holder shall submit to the Otago Regional Council for approval a Foreshore Landscape Management Plan, developed in consultation with the Crown, the Queenstown Lakes District Council and the Hawea Community Association Incorporated. The Foreshore Landscape Management Plan shall have the objective of ensuring an appropriate level of landscape amenity in the area of lake margins and adjacent

land affected by the consent holder's activities, and shall include a programme of implementation actions, methods and timelines for required actions.

b) The consent holder shall be responsible for ensuring implementation of the Foreshore Landscape Management Plan, including approved revisions of that Plan.

c) The consent holder may reassess the Foreshore Landscape Management Plan at any time in consultation with Otago Regional Council and other potentially affected parties including the Crown, Queenstown Lakes District Council and Hawea Community Association Incorporated. Any revisions to the Plan shall be submitted to Otago Regional Council for approval.

d) The consent holder shall, in consultation with the Crown, Queenstown Lakes District Council and Hawea Community Association Incorporated, reassess the Foreshore Landscape Management Plan every five years after approval of the first Foreshore Landscape Management Plan and shall submit any revised Plans to the Otago Regional Council for approval within six months of the reassessment.

e) In preparing and implementing the Foreshore Landscape Management Plan, and in any revision of that plan, priority shall be given to:

(i) removal of remnant trees and scrub which are on the bed of Lake Hawea in the vicinity of the Neck and which are visible at any lake level above 338 metres above datum;

(ii) actions to maintain an appropriate level of landscape amenity in areas of lake margins and adjacent land affected by the consent holder's activities on the southern shore of Lake Hawea, in particular :

- between the Hawea Camping Ground site and the eastern edge of Hawea Township;
- on the lake-ward side of the Gladstone Gap stopbank; and
- to the north of John's Creek hamlet.

12. Erosion Management Plan

a) Within two years of the commencement of this consent, the consent holder shall submit to the Otago Regional Council for approval an Erosion Management Plan, developed in consultation with the Crown, the Queenstown Lakes District Council and the Hawea Community Association Incorporated. The Erosion Management Plan shall have the objective of avoiding, remedying or mitigating adverse erosion effects caused by or contributed to by the consent holder's activities, address lakeshore stability issues and include a programme of implementation actions, methods and timelines for required actions.

b) The consent holder shall, be responsible for ensuring implementation of the Erosion Management Plan, including approved revisions of that Plan.

c) The consent holder shall, in consultation with the Crown, Queenstown Lakes District Council and Hawea Community Association Incorporated, reassess the Erosion Management Plan every five years after approval of the first Erosion Management Plan and shall submit any revised Plan to the Otago Regional Council for approval within six months of the reassessment.

d) In preparing and implementing the Erosion Management Plan, and any revision of it, priority shall be given to:

(i) actions to avoid remedy or mitigate actual or potential erosion effects on the lake margins and adjacent land adjoining Lake Hawea township;

(ii) actions to avoid remedy or mitigate erosion of lake margin or adjacent land at any point around the balance of Lake Hawea which affects public roads and private land, or which causes a risk to public safety.

13. Fish Passage into Tributaries

The consent holder shall ensure that during the months of April to November inclusive, adult trout are able to enter the Dingleburn, Timaru Creek and the Hunter River, from Lake Hawea. The methods adopted are to be developed in consultation with Fish & Game New Zealand (Otago Region).

14 Safety Warnings

a) The consent holder shall provide and maintain adequate signage in good repair in the vicinity of the Hawea Dam where the public can gain access, to warn the public of hazards associated with the operation of the structure and its appurtenant components and navigation risks associated with lake shore erosion, and the exposed lakebed in Lake Hawea.

b) The consent holder shall maintain a boom on the lake surface, generally 100 metres upstream of the dam, to warn lake users of the hazards at the dam face (particularly with spillways). The boom shall be secured firmly to the shore or lakebed, shall not interfere with public use of the boat ramp, and shall be maintained in good repair, in safe condition and substantially clear of debris.

15. Safety Signage

a) The consent holder shall, in consultation with the Queenstown Lakes District Council, prepare and submit to the Otago Regional Council for approval a signage plan within 6 months of the commencement of this consent.

b) The signage plan is to provide for adequate signage to warn of the risk to public safety of operational changes in river flows along the Hawea River below the Hawea Dam.

c) The signage plan shall identify the sites and the form and content of the signs used by the consent holder.

d) The consent holder shall provide and maintain signage in good repair in accordance with the signage plan including approved revisions of that plan.

e) The signage plan shall be reassessed by the consent holder and re-submitted to the Otago Regional Council for approval every three years after approval of the first signage plan prepared under condition 15(a) of this consent.

16. Archaeological Sites

a) The consent holder, in consultation with the New Zealand Historic Places Trust (The Trust) and using the Trust's statutory rights to access land if required, shall carry out a baseline survey of archaeological sites within the lakebed, and on shores potentially affected by the activities permitted by the consents. The purpose of the baseline survey shall be to record the location, nature and condition of archaeological sites and to identify any risks to their integrity. Recording shall be undertaken according to best archaeological practice and will establish specific measures that will allow effective ongoing monitoring of site

condition. The baseline survey shall be commenced no later than six months following the commencement of this consent, and completed no more than two years later.

b) The consent holder, in consultation with the Trust, shall develop a Management Plan for archaeological sites that may be adversely affected by the consent holder's operations as identified in the baseline survey. The Management Plan shall adopt a conservation and management approach consistent with best archaeological practice. It shall include management principles for at-risk sites, criteria for determining management actions, specific implementation measures, and a monitoring regime. The Plan will also assess the significance and degree of risk of at-risk sites. The Plan shall be completed no later than 3 years following commencement of this consent. A copy of the Management Plan shall be lodged with the Otago Regional Council.

c) The consent holder shall implement the Management Plan and shall contribute to the cost of recording or protection works or other measures that may be required in proportion to the extent to which its activities affect at-risk sites. Work shall be prioritised according to the degree of risk and the significance of the site.

d) Monitoring of sites in accordance with the Management Plan shall occur at intervals of no more than once every three years, unless otherwise agreed with the Trust.

17. Hazard Map for Gladstone Gap over flow

The Consent Holder shall, within three months from the commencement of this consent supply to Otago Regional Council, Queenstown Lakes District Council and Hawea Community Association Incorporated a plan showing the extent of the likely overland flow path to the Hawea River if the Gladstone Gap stopbank is overtopped.

18. Close Down Condition

If at the expiry of the term of this consent the consent holder:

a) does not apply for a similar new consent; or

b) applies for a new (replacement) resource consent and the application is refused –

then the consent holder shall cease operating the resource consent on the following conditions:

(i) it shall (temporarily) continue to act as if the resource consent was in existence;

(ii) it shall forthwith after the resource consent expires or a renewal is refused (as the case may be) and after consulting with Queenstown Lakes District Council, Central Otago District Council, Clutha District Council and Fish & Game New Zealand (Otago Region) prepare a management plan for the closing down of the scheme of which the resource consent is part, and submit that management plan to the Otago Regional Council;

(iii) after the management plan is approved by the Otago Regional Council, the consent-holder shall follow the management plan with any changes made by the Otago Regional Council for the closing down of the scheme for as long as is required by that management plan.

Issued at Dunedin this 9th Day of August 2007 following the Environment Court Order of Judge Jackson dated 25 May 2007.
Reissued this 15th day of July 2008 to reflect a correction to the legal description and expiry date.

Marian Weaver
R M Procedural Specialist

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ATTACHMENT 2

Contact's response to Question 4 – Economic Benefits of the Project

29 September 2025

Ministry for the Environment

c/- Ilana Miller

General Manager, Delivery Operations
PO Box 10362
Wellington
6143

Dear Ms Miller,

Request for further information on application for referral of the Clutha Hydro Scheme project under the Fast-track Approvals Act 2024.

Thank you for the letter received 15 September 2025 regarding the following request for information:

Further information (including metrics) identifying and quantifying economic benefits the project will deliver and over what timeframe, both in the regional and national context.

The electricity market has been stressed by gas decline and is rapidly decarbonising

The New Zealand electricity market has seen a material investment into new forms of generation over the past 5 years. Contact Energy has completed $1.2bn of new renewable generation projects that have brought an additional 225 MW (1.9 TWh per annum) onstream. Projects totaling $1.1bn are currently under construction spanning geothermal, solar and grid-scale batteries. These investments will extend Contact's operations on the Wairakei steamfield and will bring a further 0.6 TWh of net new annual generation and 100 MW of new storage onstream. These investments underscore the industry's commitment to building new generation to support decarbonisation objectives and meet the forecast increase in electricity usage over the coming decade.

However, this has been set against a backdrop of sustained decline in gas deliverability since 2018[1] which has been a significant headwind for the market. The decline in availability of gas and the impact of an ageing thermal fleet has increasingly presented challenges for the industry to firm renewable generation sources through the winter months and, in particular, through periods of low hydrological inflows into New Zealand's major hydro reservoirs in the South Island, including Lake Hāwea. Electrification, particularly the conversion of industrial processes from gas to electricity, is driving growth in the demand for electricity. While gas is rapidly exiting the system, it remains an important enabler of a smooth transition for industrial gas users. Among renewables, only stored hydro can provide firming capability at scale, and so maximising its availability is critical. Market participants, including Contact, are investing heavily in new renewable generation. The most effective pathway through this transition is to maximise the use of stored hydro for firming while deploying remaining gas strategically to support industrial transition and maintain system reliability.

The market conditions observed in August 2024 served to demonstrate this challenge. Through a period of historically low hydro inflows, low renewable output from New Zealand's wind farms, and under-delivery on contracted gas supplies, the market experienced a period of stress in which spot electricity prices were significantly elevated. Through this period, industrial demand response from the New Zealand Aluminium Smelter (NZAS) and Methanex was procured as an alternative form of firming to ensure security of supply for the electricity market. This took the form of reduced availability of electricity for NZAS while Methanex curtailed

[1] The Ministry of Business, Innovation and Employment (MBIE) have issued the report titled Energy in New Zealand 2025 which contains an outlook for natural gas in New Zealand. Figure 19 of this report presents gas production profiles as reported from 1 January 2020 through 1 January 2025 and demonstrates a sustained decline that is expected to continue through to 2040 (Gas | Ministry of Business, Innovation & Employment).

operations and re-directed some its existing gas supplies to provide energy for the electricity market. In both instances, these were costly sources of firming. Lower cost sources of firming for periods such as August 2024 are needed to ensure the market can continue to build out renewable generation and manage the dry-year risk posed by New Zealand's hydro dominated energy system. It is important to note that significant hydro inflows late in 2024, following this period of stress in August 2024, led to forced releases and spilt energy toward the end of the year. From late November 2024 to early January 2025, more than the full 67 GWh of additional storage that would be made available from Lake Hāwea was spilled, or forced to be used inefficiently, due to Lake Hāwea's current operational range.

Outlined in this response is the rationale for why an increase in the operating range for Lake Hāwea by 2m is an opportunity to support affordable energy, improve security of supply, and support the longer-term sustainability of the market as it transitions to a highly renewable state. The project represents an efficient and pragmatic step forward – it leverages existing infrastructure, maximising the efficient use of a significant existing water storage resource. It would be immediately available for the market and would be a valuable part of a wider suite of improvements to New Zealand's energy system.

Fundamentally, a 2m increase in the operating range for Lake Hāwea represents added storage that can support market decarbonisation and reduce its reliance on fossil fuels. Hydro reservoirs such as Lake Hāwea provide energy storage over multi-day and seasonal horizons, meaning they are ideal to manage variability across longer timeframes; whereas grid-scale batteries are typically designed for short-duration storage, optimising energy use over minutes to hours rather than many days or weeks. To put this in context, the 67 GWh of storage made available in Lake Hāwea would be more than 300 times the storage available in a 100 MW and 200 MWh grid-scale battery such as the Glenbrook-Ohurua battery being developed by Contact.

The change to the operating range for Lake Hāwea is proposed to be in place through to 2042. This would mean the proposed change would align with the consents for the existing Clutha Hydro Scheme. This will provide for certainty in the management of security of supply and support longer-term investment planning for renewable generation.

In terms of broader economic activity in New Zealand, the proposed change will place less reliance on industrial energy users, such as NZAS or Methanex, curtailing their operations to support the power market in periods of stress such as that observed in August 2024. Put simply, a reduced burden on our industrial users through such periods of stress will mean more fuel in the form of electricity and gas that can enable economic activity and employment across New Zealand.

Prioritising security of supply

A reduction in the lower operating limit for Lake Hāwea by 2m from 338 metres above sea level (masl) to 336 masl will lead to an increase of 67 GWh in the storage capacity of Lake Hāwea. This increase represents a meaningful enhancement to the accessible storage in Lake Hāwea – it is almost a 25% uplift that would support the security of supply in the New Zealand electricity market.

With the closure of the Taranaki Combined Cycle (TCC) plant at the end of 2025 and the ongoing deterioration of upstream gas availability, the energy system is increasingly reliant on renewable generation. In this context, additional hydro storage becomes a critical buffer against dry-year risk – not just for Contact Energy, but for the electricity system as a whole. This change is one of a collection of measures that New Zealand needs to take to support security of supply, but given that this utilises existing infrastructure and storage resources it is lower cost than some of the other options (e.g. demand response from industrial users that comes with a broader economic cost to New Zealand).

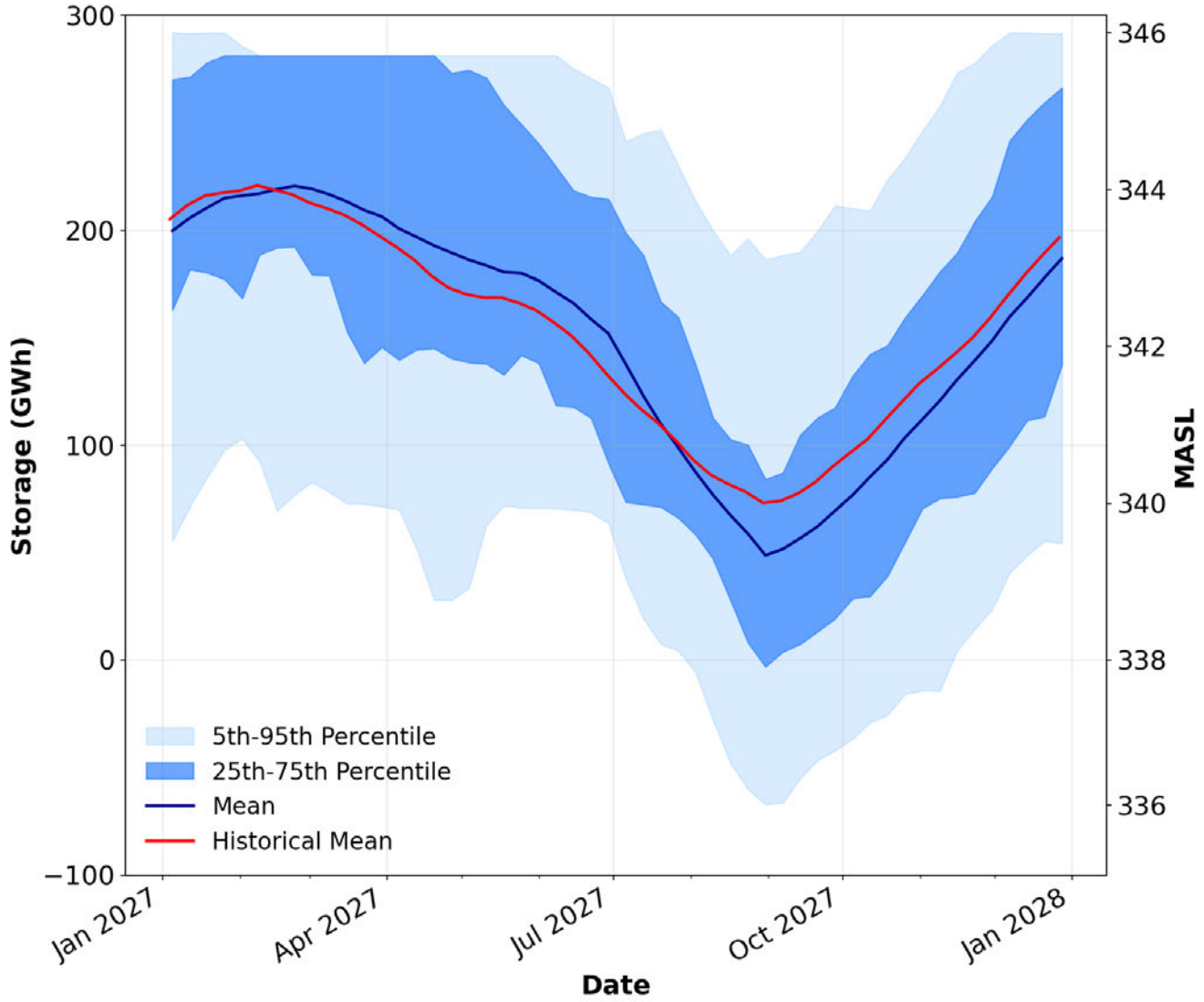
With greater storage available in Lake Hāwea, the reliance on thermal generation, especially during periods of low inflows, can be reduced. The ability to store and later release more renewable hydro energy means that gas and coal-fired plants will be called upon less frequently, reducing both the threat and impact of dry years. This not only lowers operational costs but also leads to a measurable reduction in carbon emissions from the electricity sector. By making better use of existing hydro resources, the market can progress further towards its decarbonisation goals, while maintaining reliability and security of supply.

Figure 1 below illustrates a clear seasonal shift in how Lake Hāwea is managed under the modelled scenario. Compared to historical patterns, the lake is held higher through late Q1 and Q2, while levels are drawn down more deeply during Q3. This reflects a more dynamic use of storage to complement the evolving generation profile, particularly the increasing share of intermittent renewables (solar and wind). Modelling indicates that the additional 2m of storage is utilised in approximately one in three years, typically for an average period of 2

months, most often during September and October. This targeted use enhances flexibility without significantly altering the mean storage level over the summer months. This modelling has been conducted by independent specialists and leverages public reference points such as the demand forecast for electricity from MBIE's Electricity Demand and Generation Scenarios (EDGS).

Figure 1: Forecast storage trajectory over 12 months for Lake Hāwea[2]

The average historical storage trajectory for Lake Hāwea is depicted below (in red) and contrasted to the forecast storage trajectory (in blue) with the associated distribution of possible trajectories under wet through to dry hydro inflows. This forecast is presented for 2027.



Reduced costs faced by consumers and more efficient management of dry years

The New Zealand market benefits from increased flexibility are significant – the proposed change will support affordability of energy for consumers, not only security of supply for the market. This is a national benefit tied to the national electricity market. The improved ability to manage dry-year risk in the winter months and absorb renewable energy late in the year in summer contributes to lower spot prices and reduced volatility. This, in turn, supports lower contract pricing, benefiting both retailers and large industrial users. By mitigating the risk of shortfalls during dry periods – when thermal generation would typically be called upon at high cost – the additional 2m of storage acts as a stabilising force in the market, aligning with the broader goals of security of

[2] This figure presents the historical trajectory for Lake Hāwea (in red) versus the forecast storage trajectory on average (in blue) and the corresponding percentiles across possible hydrological years. This forecast assumes an increased operating range of 10m from 336m to 346m.

supply, affordability, and sustainability. This added storage is critical in the near term given the acute issue posed by declining deliverability of natural gas.

The modelled results presented in Figure 1 lead to an average reduction in the wholesale electricity price of approximately $2/MWh. This leads to an annualised reduction in cost for consumers of $80m.[3] This benefit would be realised over several years and persist through to 2042 (the period over which the change in the consent has been requested) and is expected to grow in the future as seasonal storage becomes increasingly important with the transition away from fossil fuels.

In addition, the increased amount of storage made available in Lake Hāwea will disproportionately reduce prices through periods of low hydrological inflows in the winter months such as that observed in August 2024. The modelled results demonstrate a reduction of approximately $10/MWh on average through dry periods. This serves to reduce the dry-year risk faced by the electricity system and provide more certainty with seasonal firming.

Ultimately, the additional seasonal firming unlocked through this project will enhance price stability, reducing risk and making the market more attractive for both new demand (i.e. sources of electrification) and new supply, thereby supporting a more resilient and sustainable electricity system. The aforementioned cost reductions for consumers do not quantify these broader economic benefits that would accrue over the long term.

Leveraging New Zealand's existing infrastructure to integrate new renewables

The fundamental inflow characteristics of Lake Hāwea will remain unchanged by the project; however, the increased volume of accessible storage will enable more effective utilisation of hydro inflows when paired with renewable generation such as wind and solar farms. In a high-renewables environment – particularly late in the year through October, November and December when solar generation is seasonally strong – the lake can refill more rapidly than observed in historical patterns.

Crucially, the additional 2m of headroom reduces the likelihood of spill events prior to winter that would otherwise occur, where high renewable generation coincides with limited flexibility in the storage of Lake Hāwea. By capturing and retaining more water during periods of surplus, the system is better positioned to manage periods of scarcity in the winter months, thereby improving resilience and reducing reliance on fossil fuels or even emergency measures.

By reducing the frequency and volume of spill and curtailment during periods of high inflows and must-run renewable output, the system can accommodate more variable generation (particularly wind and solar) without compromising hydro efficiency. This creates a more favourable environment for new renewable investment.

Yours sincerely

Mike Fuge
Chief Executive
Contact Energy Limited

[3] This calculation reflects the change in the average price paid by retailers and spot-exposed consumers (i.e. the change in the Load Weighted Average Price, LWAP) multiplied by the forecast annualised load for the market in 2027 of approximately 40 TWh (excluding the New Zealand Aluminium Smelter).