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

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** **Applicant**

STATEMENT OF EVIDENCE OF BRENT LAYTON ON BEHALF OF MERIDIAN ENERGY LIMITED

ECONOMIC BENEFITS

Dated: 15 April 2026

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INTRODUCTION

1. My full name is Thomas Brent Layton.

2. I am a self-employed economic consultant.

3. My previous positions most relevant to this project are that I was:

    (a) Chair of the Electricity Authority (the Authority) for ten years from its formation until November 2020;

    (b) Chair of the Rules Committee of the New Zealand Electricity Market during the years in which the initial Rules of the market were drafted by this Committee and first came into operation;

    (c) Independent director of the Electricity Market Company Limited (EMCO) that operated the electricity market during the formative years of the market from 1994 to 1999;

    (d) Director of Transpower New Zealand, the grid owner and system operator from 1999 until 2002; and

    (e) Chair of the Technical Advisory Group for the Ministerial Review of Electricity Market Performance and Governance that produced the Brownlee Report in 2009, which reset the operation and governance of the market, including the maintenance of security of supply, to their current arrangements.

4. In a former role as Chief Executive of the New Zealand Institute of Economic Research, I provided expert evidence to the Environment Court and local councils in relation to generator consent applications for approximately 20 plants.

5. I graduated from Victoria University of Wellington with a Bachelor of Commerce and Administration in Economics, a Bachelor of Arts with First Class Honours in Economic History and Econometrics and Doctor of Philosophy in Economic History.

6. I have been asked by Meridian to provide a response to the specific matters contained in the written comments on the application from persons invited by the Panel to comment under section 53 of the Act. These are:

a. Transpower New Zealand Limited (Transpower)

b. Parliamentary Commissioner for the Environment (PCE)

c. Electricity Authority (the Authority)

d. Genesis Energy Limited (Genesis)

7. I have prepared this statement within the limited time available to me. I am able to provide a more detailed response to the issues covered in this statement if the Expert Panel (Panel) requires further assistance from me.

CODE OF CONDUCT

8. I confirm that I have read the Code of Conduct for Expert Witnesses as contained in section 9 of the Environment Court Practice Note (2023), and have complied with it in preparing this evidence. I confirm the issues addressed in this evidence are within my area of expertise, and I have not omitted material facts known to me that might alter or detract from my evidence.

RESPONSE TO COMMENTS

9. Transpower, the party contracted by the Authority to be the System Operator, believes the proposal will have limited benefits and adverse impacts on the security of electricity supply for consumers and adverse impacts by bypassing established mechanisms to access contingent hydro storage.

10. The PCE shares some of Transpower's concerns about security of supply but is also concerned that granting the consent will reduce the incentives of parties to invest in renewable generation. It also wonders whether Meridian should face a resource use price for access to Lake Pūkaki's contingent hydro reserve.

11. The Authority, which is the Independent Crown Entity that regulates the electricity industry using its statutory and tertiary legislative powers, **supports** Meridian's proposal. It believes granting the consent will promote all three limbs of the Authority' statutory objective: "to promote competition in, reliable supply by, and efficient operation of, the electricity industry for the long-term benefit of consumers."

12. Genesis raises issues in relation to how the lowering of Lake Pūkaki may impact the structure and operation of its Tekapo B hydro generation plant that is on the shores of Lake Pūkaki. It also supports Transpower in its views that the proposal will have limited benefits and adverse impacts on the security of electricity supply for consumers and adverse impacts by bypassing established mechanisms to access contingent hydro storage.

13. My role is to use my economic expertise and knowledge of the operation of the electricity industry to assist the Panel in its task to reach a decision in the face of quite divergent opinions on the risks and merits of Meridian's application.

14. Transpower, the PCE and the Authority all limit their comments to Meridian's application for eased access to 5 m of contingent hydro storage in Lake Pūkaki. They do not comment on Meridian's applications for consent to undertake armouring of the dam face and abutments. Implicitly, they all assume that the contingent storage should be able to be used, which requires the dam to be protected. If not to be used, why armour the dam? They could have easily made this point but chose not to do so.

15. The divergence between these three parties is over the conditions under which Meridian should be able to utilise the contingent hydro storage. Not over whether the level of Lake Pūkaki should ever be lowered below 518 m to 513 m RL.

16. Transpower recognised that access conditions should be eased by increasing the buffer used in calculating when the Alert and Emergency Contingent Storage Release Boundaries (CSRB) are breached. It put forward this in amendments to the Security of Supply Forecasting and Information Policy (SOSFIP). This easing will come into effect on 1 May 2026. Transpower also thinks that in 3 to 5 years' time, further easing may be justified, but not now. (Transpower Paragraph 8).

17. Transpower's concern about further easing now seems to be that the modelling it commissioned from John Culy shows a "black swan" event, such as a simultaneous extreme dry year and a very large and extended thermal generator failure, could be costly in 2026, if access to Lake Pūkaki's contingent storage is eased further. The modelling shows that beyond 2026 the potential costs of the "black swan" event fall rapidly and in a few years

become much lower due to the generation plants currently under construction coming on stream.

18. Transpower is, however, uncertain if the easing it has incorporated in the SOSFIP amendments coming into force on 1 May 2026 will be enough. It has also clarified in the SOSFIP its ability to further ease access, at its discretion, on an *ad hoc* basis. It decided to not retain the power it previously had to tighten access at its discretion.

19. As noted, the PCE has some hesitancy but does not categorically oppose changes to access. It suggests that maybe Meridian should face an access charge. It does not, however, offer any suggestion as to how the Panel could do this legally and how the charge could be set to provide the right incentives for efficiency in the use of resources, including contingent reserves. I am advised by counsel that it would not be lawful for the Panel to set a charge along the lines suggested by the PCE. I do not consider this further, other than to make some brief comments later about the extent to which this concept was addressed in the Brownlee Review.

20. The Authority believes eased access is justified. It accepted Transpower's proposals in relation to the SOSFIP but has also made it clear when doing so that it was not entirely happy with the arrangement. It stated on release of its decision "the existing regime determining the volumes [of contingent storage] available does not reflect a coordinated approach to determine how much is 'enough' for covering a dry year risk." (See Transpower Paragraph 61). The Authority supports Meridian being granted consent for eased access and thinks it will promote competition, reliability and efficiency of the electricity industry for the long-term benefit of consumers. (Authority Paragraphs 33 – 36).

21. One of the key focuses in the Genesis comments concerns the potential impact of lowering Lake Pūkaki below 518 m RL on the Tekapo B tailrace weir and rock chute. I am not a dam engineer and so I will not comment on this aspect. A second focus of Genesis's comments is to, in general, support Mr Culy's comments on behalf of Transpower about Meridian's calculations of the market benefits of eased access. I have addressed these comments in responding to Transpower and do not see a need to comment further.

22. The area of Genesis comments I will address are those contained in Technical Advice by Simon Coates, a director of Concept Consulting, under the headings “Review of Meridian’s benefits analysis”, “Review of conceptual framework for contingent storage” “How does the NZ electricity system for 2026 to 2028 compare to Winter 2024?”.

TRANSPOWER

23. Transpower has conveniently summarised many of its objections to Meridian’s proposal in Paragraph 11 of its written comments.

24. In Paragraph 11.1 Transpower claims that Meridian is seeking “unfettered access to contingent hydro storage”. This is not correct. As I explained in my Report appended to Meridian’s application, access to contingent storage is restrained by the Authority’s customer compensation scheme, if an Official Conservation Campaign (OCC) is implemented, and by the imposition of very high scarcity pricing based on the value of lost loads if outages are required to match demand with supply. An OCC could still be implemented whatever the applicable arrangements are at Lake Pūkaki.

25. The minimum level of payment required under the customer compensation scheme is reviewed and consulted upon by the Authority every two years. It is based on the estimated financial benefit an unhedged retailer would receive from the reduction in demand likely from an Official Conservation Campaign. Meridian has not sought the removal or amendment of either of these financial disincentives to the use of contingent storage.

26. In Paragraph 11.2 Transpower claims that, if the consent is granted, the Authority will be denied the opportunity to allow parties to be consulted about security of supply issues involving contingent hydro storage. This is not correct. As I explained in my “3 pager” summary of my Report prepared for the Panel:

> The Electricity Authority has been delegated by Parliament the power to pass Code with the force of law on electricity market participants to pursue its statutory objective; it has tertiary legislative powers. In the current context, if the panel did decide to grant Meridian Energy the eased access to contingent hydro storage in Lake Pūkaki it is seeking, but the Authority thought this did not promote the long-term benefit of consumers because, for example, it undermined reliable supply, it

could use its tertiary legislative powers to effectively override or amend the panel's decision. It would, however, have to set out its assessment of the benefits and costs of doing this and the alternatives and be prepared to defend these publicly before the Regulations Review Select Committee.

What the Authority cannot do, but the Panel can do, is alter the consents controlling Meridian's access to water between 513 m RL and 518 m RL. It is trite but true to say that only the Authority can do what it considers is required in relation to the electricty Code.

27. In its written comments, Transpower has at Paragraph 61, an extensive quote from an Authority document. Included in this quote is the Authority's statement made in February 2026 "Any changes in the consents that govern contingent storage will necessitate changes to the SOSFIP." Transpower's written comments show it is well aware this will involve consultation with interested parties and that its claim that a positive decision on the application by the Panel will preclude interested party participation is not a necessary or likely consequence.

28. At Paragraph 11.3 Transpower refers to the "public welfare benefits of making contingent hydro storage available for use on the wholesale electricity market and the reduction in power system resilience is a policy judgement; …" To assess the public welfare benefits of a policy it is usual to net out any wealth transfers. It is less clear cut that you net transfers out when assessing "the long-term benefits of consumers", which is what the statutory objective of the Authority requires it to assess.

29. In practical terms, if a policy results in generators getting lower prices and consumers paying these lower prices, this, *per se,* is a wealth transfer from generators to consumers, and so not a net public welfare benefit. I think most consumers and politicians would, however, argue that such a policy change brings "long-term benefits to consumers", if sustainable.

30. Much of the criticism of Meridian's modelling by Transpower amounts to claiming that Meridian has not netted out wealth transfers in its calculations. Meridian has not claimed it has done public welfare benefit calculations and Transpower makes no case that they are relevant, given that the Authority's

objective refers to “long-term benefits of consumers”. The key is whether a wealth transfer is sustainable in the long term.

31. A regulator making a decision to transfer wealth from one group (e.g. generators) to another group (e.g. electricity consumers) will not always be sustainable as a benefit to consumers in the long-term because of the reactions in response of the party subject to the regulatory taking. For example, a decision to impose a water tax on hydro generators and give the money to consumers or local residents will result, over time, in less investment in hydro generation and higher prices for consumers.

32. However, one area in which economic regulators often make decisions that result mainly in wealth transfers between producers and consumers and little or no net benefit, at least initially, is in the area of promoting competition in markets. The benefits to consumers of increased competition in the long-term are well known but a lot of the initial economic effects will be transfers of wealth from one, or a few producers, to consumers.

33. To illustrate, consider a decision to ease access to contingent hydro resources so they are more readily available to compete with tightly held thermal generation plant for providing a back-up for managing insecurity of supply in dry years. This policy change is likely to result in a lot of wealth transfers in dry years from the owners of these thermal plants to consumers. There may, initially be relatively modest net economic benefits to the economy as a whole, i.e. to producers and consumers considered together, compared with the overall benefit to consumers from lower prices. However, there is also likely to be substantial long-term benefits to consumers from such action, if the new level of competition is maintained.

34. Meridian is proposing eased access to contingent hydro storage so dry years can be managed more efficiently and the higher cost forms of contingency, such as demand response agreements shutting down manufacturers, can be avoided when appropriate to do so. The Authority recognises this greater competition would be a long-term benefit to consumers and Parliament gave the Authority considerable power to pursue this objective.

35. Paragraph 11.4 of Transpower’s written comments states:

> **The removal of the Lake Pūkaki contingent hydro storage will eliminate significant contingent storage from the electricity**

> **system** and therefore increase the risk that, in potential short supply contingencies assessed under the Electricity Authority's risk tests, the adverse consequences for the power system and New Zealand economy would be very significant. [Emphasis added]

36. It may be an unfortunate choice of words, but the highlighted statement seems to suggest that Meridian is applying to remove the very significant contingent storage in the lake from the electricity system. It is not. It has applied for eased conditions of access to use 5 m of storage below 518 m RL. 'Removal' of contingent storage is used in many instances in the Transpower comments and it is the wrong concept.

37. If some of the contingent storage is used before, for example, calling on some of the demand response contracts that are in place, or thermal generation contracts the total availability of resources to manage dry year risk will not be reduced. The Authority recognises this: "increasing the availability of contingent storage in Lake Pūkaki is likely to lower the cost of system security, because it would increase the amount of useable fuel in the system and allow trade-offs to be made between different contingent arrangements." (Authority Paragraph 19).

38. The choice of words by Transpower in its Paragraph 11.4 may be unfortunate. However, Transpower expresses its concern in other comments in a way that suggests Meridian is wanting to remove the contingent hydro storage in Lake Pūkaki from supporting system security. For example, at Paragraph 11.7 Transpower refers to "loss of access to the Lake Pūkaki contingent hydro storage". At Paragraph 23.3 (b) it refers to "the potential costs and increased risk of a security of supply incident resulting from the unavailability of Lake Pūkaki contingent hydro storage."

39. Meridian has applied for eased access. The Authority notes "Both Meridian and SO [i.e.Transpower] modelling show that suspending the current arrangements for access to Pūkaki contingent storage means that some of the water will be used more often, although still very seldom." (Authority Paragraph 32).

40. Transpower, however, seems to have firmly in its mind if there is eased access Meridian will immediately use all this water as part of its normal operations. It implicitly disregards both its own modeller's results and the incentives set by

the Authority and the market on Meridian to be very cautious about exhausting the water resources in the Waitaki system.

41. In Paragraph 11.5 Transpower reports that the independent modelling it commissioned shows the cost of an outage is particularly acute over the next three years, before expected additional generation becomes available. It refers in bold type to an estimate of $440 million for a double contingency event of "low inflows combined with a major long-term plant outage of the kind experienced in 2023".

42. However, what Transpower does not say is the modelled estimate of $440 million relates only to 2026, this year, and we know that the double contingency event modelled is extremely unlikely to happen this year because this is not likely to be an extreme dry year. The country's hydro lakes started this year very full. Inflows have been slightly lower than normal since February, but lake levels are still around average levels for this time of year.

43. To cite the $440 million modelled figure is not helpful to the Panel. It is misleading as a comparator. This disclosure failure matters because the modelled figure of the cost of the double contingency event in 2028 falls to $119 million against Transpower modeller's estimated cost of higher prices due to constrained access to contingent hydro storage of $41 million in that year. For 2035, the figures are $9 million against higher prices of $28 million.

44. Transpower's extensive discussion in its comments of high impact low probability (HILP) events misses the point. It would be hard to argue that avoiding a "very unlikely" event that could cost $119 million, if it should happen, by paying an annual certain sum of an estimated $41 million is risk management justifiable on HILP grounds.

45. Making that judgement necessitates an assessment of the likelihood of the HILP and weighting the estimated benefit by that probability. Transpower describes a double contingency event as "low probability" (Transpower Paragraph 11.5). The Authority says "the scenario itself is very unlikely." (Authority Paragraph 41). If "very unlikely" or "low probability" means less than a 2% probability (p=0.02), which seems 'generous' to Transpower's argument, a $119m cost with this probability equates to a maximum expected cost in 2028 of $2.38 million (i.e. $119m times 0.02). Moreover, the sum of $119m is not high impact in the context of the electricity industry.

46. Avoiding a “very unlikely” event that could cost $9 million in 2035, if it should happen, by incurring an estimated cost of $28 million is not even risk management. It is a waste of resources.

47. In Paragraph 11.6 of its written comments, Transpower claims the modelling results they commissioned estimated the public welfare benefits in terms of reduced fuel and direct costs of easier access to Pūkaki’s contingent storage as limited. I have already commented on the issue of public welfare benefits relative to long-term benefits to consumers, which is what the Authority and Transpower, as its contracted system operator, should be focused on.

48. Detailed discussion of modelling assumptions and results is not likely to be very helpful to the Panel. This is particularly true because modelling focuses on spot price effects, since they are easy to replicate. I explained to the Panel at the Project briefing that the spot prices in the electricity market come out of a large linear programming mathematical model therefore it is conceptually easy to change a few parameters and re-run the model and see the effect. Of course, in practice, there is a lot of work and judgement involved.

49. However, as I pointed out in my Report, a lot of the benefit of more effectively dealing with dry year risk will be from reducing the premium of forward and contract prices that reflects dry year risk. As I note in my Report, this will not generate wealth transfers. It will reflect real resources savings and better use of resources.

50. In early February, the Government announced that it has agreed to take the next steps in procurement of a liquified natural gas (LNG) import facility with capacity of 1,500 GWh. The rationale was to:

    (a) Reduce forward contract electricity prices;

    (b) Improve system resilience, reduce extreme spot prices and support investment in renewable generation; and

    (c) Act as a safety net for industrial gas users and extend the viability of the gas network.

51. The Cabinet Paper relating to the proposal is instructive for the current application. It reports on research that estimates that “By 2025, higher energy prices are estimated to have reduced gross domestic product by $5.2 billion

(1.25%), lowered real wages by 1.4%, cut household spending by 1.65%,and worsened the trade balance by $275 million. A recent Electricity Authority survey found that four in ten households and one in three small businesses are not confident they can afford their power bills over the next six months." (LNG Cabinet Paper Paragraph 10).

52. The Cabinet Paper also includes estimates of the effects of a 1,500 GWh LNG contingent reserve facility: "The mere availability of LNG as dry-year insurance cover is expected to reduce forward electricity contract prices by **at least** $10/MWh, saving consumers around $400 million annually". [Emphasis added] (LNG Cabinet Paper Paragraph 5). There is nothing specific about this estimate that means it only applies to LNG dry risk reserves. The estimate would apply equally to increases in effective other dry year cover, including making contingent hydro storage accessible, in practice, in a dry year.

53. In my opinion, under the current and revised SOSFIP, participants in electricity forward and futures markets will continue to treat the 545 GWh of contingent hydro storage in Lake Pūkaki as effectively unavailable to deal with dry year risk alone. Transpower continues to want to reserve it for "very unlikely" "low probability" black swan events.

54. If Meridian's application is granted, I believe forward premiums will adjust to reflect that this dry year cover of 545 GWh is now available. On a pro rata basis, if MBIE is correct in the Cabinet Paper, that an extra 1,500 GWh of dry year risk insurance generates *at least* $400 million per year to consumers, an extra 545 GWh from Pūkaki will generate at least $145 million per year to consumers.

55. MBIE's estimates are based on work by a number of reputable economic consultancies, including Boston Consulting and Concept Consulting. It is also clear from the Cabinet Paper that MBIE has been very careful to be conservative about benefits.

56. The economic impact of dry year risk and the benefit to consumers of reducing it has been widely discussed in various forums over several years. MBIE's paper to Cabinet is the first instance I am aware of that another party has adopted the approach to estimation of effects that I used in my Report to the Panel. You may recall that I considered dry year risk premiums in forward and futures prices and how policy changes in relation to eased access to

contingent hydro storage at Lake Pūkaki may impact them. This is what MBIE has done in the Cabinet Paper to assess conservatively the likely benefit to consumers of facilitating LNG importation.

57. In Paragraph 12 of its written comments, Transpower summarises its concerns about the effect of the proposal on the operation of Genesis's Tekapo scheme. As stated above in paragraph 22, I will leave comments on dam engineering to others with expertise in that area.

58. However, I note that it is entirely to be expected that Genesis will attempt to use any available leverage in its discussions with Meridian regarding the potential effects of changes to access consents. In this context, Genesis serves as the primary provider of thermal dry year risk cover for the market and eased access for Meridian to contingent storage in Lake Pūkaki will effectively increase competition in this market and decrease the price Genesis can expect to receive for that cover.

59. I address Genesis's own comments later in this response.

PARLIAMENTARY COMMISSIONER FOR THE ENVIRONMENT

60. The PCE's "chief concern is the longer-term impacts of giving Meridian unrestricted access to contingent storage. This could 'crowd out' other generation, leading to increased systemic risk without any affordability benefit. It could ultimately slow the transition towards a fully renewable electricity generation system."

61. I have already explained why I do not think it is correct to claim Meridian is seeking unrestricted access to contingent storage. It is seeking eased access in relation to consents but the Authority's customer compensation scheme and scarcity pricing regimes, which are designed to incentivise appropriately market based responses to security of supply, will remain. Meridian is not seeking their removal.

62. I have already commented on the affordability benefits of the eased consent.

63. I have already noted I agree with the Authority that the eased consents will promote reliability for the long-term benefit of consumers.

64. The application is for a 3-year period and so is unlikely to have any impact on generation investment intentions. Even if the consent were for a longer period,

it is unlikely to materially 'crowd out' the building of other generation. As the Authority has pointed out, according to both Transpower and Meridian's modelling, the contingent storage is likely to be little used. Important to be there and important that access is certain when required but not a material substitute for other generation plants to deal with any increases in demand.

65. The PCE also wonders whether Meridian should face a price for accessing the contingent hydro storage in Lake Pūkaki. He notes in a footnote that this proposition was previously raised in an appendix to the Brownlee Review.

66. It did not make it to the final report or list of recommendations of the Review. An issue is, as the PCE recognises, how do you rationally set the price; what are the price signals you want to send? What emerged from the Brownlee Review was the customer compensation scheme and scarcity pricing. These have economic rationales as to why they send the appropriate price signals about protecting the security of supply to an efficient level.

ELECTRICITY AUTHORITY

67. The Authority is supportive of Meridian's application being granted as it thinks the granting of the application will promote its statutory objective. One criticism I have is that it is more cautious in its assessments than I think it should be but it is hard for a regulator to enthusiastically support in public one of the market participants it is required to regulate, especially one of the larger ones.

68. The Authority has clear statutory objectives. The statute is explicit that a main objective is a requirement to promote competition in the electricity industry for the long-term benefit of consumers. The Authority agrees Meridian's proposal will do that. However, the Authority doubtless recognises that by providing for all responses to shortage more equally, it tilts the balance of competitive tensions against Genesis, which is currently the principal provider of dry year thermal generation cover, and in favour of Meridian, the generator most likely to be adversely affected in dry years. Consumers will win but the impact will not be equal among market participants.

69. The Authority has also been somewhat muted in its criticism of Transpower. The system operator interprets the Authority's February approval of its revised SOSFIP as an endorsement, viewing it as justification for the Panel not to grant consent. However, as I have noted, even the section from the Authority's decision document quoted at length by Transpower contains a clear message

that it is not fully happy with the policy. The Authority document states “the existing regime determining the volumes [of contingent storage] available does not reflect a coordinated approach to determine how much is ‘enough’ for covering dry year risk.” It goes on to discuss its intention to continue to work on this topic.

70. The Authority’s comments also contain a very useful statement for the Panel of its role relative to that of Transpower: “In summary, the EA is focused on competition, and on the efficiency and reliability of the system as a whole. The EA’s role covers reliability at a system-wide level and also in relation to key policy issues, like dry year risk and contingent storage settings. The SO is more focused on forecasting security of supply and managing supply emergencies.” (Authority Paragraph 13) This description of Transpower’s role reflects section 8 of the Electricity Industry Act 2010 (the Act).

71. In short, the Authority is, in a polite way, saying that Transpower is involving itself in matters that are really the Authority’s responsibility and the Panel should be aware that it may have strayed from its functions under the Act. Transpower is not the policy setter. It is not responsible for security of supply. It is not the body that should be setting the merit order of when various energy resources should be used.

GENESIS

72. In his Technical Advice to Genesis, Mr Coates argues that the electricity system is in a much better position than it was in 2024 to deal with a dry year and reduced gas supply and that there will be no repeat of the high spot prices, a need to call on industries to shut and divert electricity and gas to other uses and general public and political alarm in the three years 2026-28.

73. I agree with him about 2026; that is why I think Transpower has misled the Panel with its reference to a potential cost of $440 million. But I think to assume things will be fine in 2027 and 2028 is not justified. Mr Coates may turn out to be correct, but at this point in time that is just speculation. We may face consecutive extremely dry years like 1991 and 1992. It's uncertain.

74. Mr Coates thinks that contingent hydro storage is intended to be only available as a fuel-of-last resort and to deal with black swan events, as opposed to dry year risk. Mr Coates offers no authority for this view based on market and regulatory design because there is none.

75. The Authority is responsible for the policies around security of supply and access to contingent storage. Transpower is responsible for provision of security of supply information and emergency management. The Authority's comments supporting Meridian's application make no mention that if the consent is granted it will overturn some fuel-of-last resort or black swan policies it has put in place. The Authority in its comments has, however, politely pointed out to the Panel that Transpower sometimes strays beyond its statutory functions. Its view, reflected by Mr Coates, about fuel-of-last resort and black swan insurance is an illustration of this. It may think this should be the situation, but it is not and the Authority is the party with the Code making power, not Transpower.

76. As noted earlier, a main statutory objective of the Authority is to promote the efficient operation of the electricity industry for the long term benefit of consumers. The Authority states in its comments: "The proposal should also improve economic efficiency. This is because, with the contingent storage requirements in place, higher opportunity cost resources can be used before the Pūkaki contingent storage." (Authority Paragraph 35) It goes on to question whether in 2024 the outcome of shutting industrial plants while leaving the contingent storage (plus a margin) in the lakes, including Pūkaki, was an inefficient outcome. The Authority is well aware that having a rigid approach of defining contingent hydro storage as the fuel-of-last resort is in conflict with its statutory objective to promote efficiency and has never endorsed this approach.

77. If the contingent storage in hydro lakes was intended by the Authority to be a black swan event reserve, then it is reasonable to assume it would have consulted on this, but it has not. The problem with treating hydro reserves in the South Island in this way is that under many conceivable disaster situations it would be of no, or limited, use. For example, a major outage of the HVDC, or a catastrophic fire or earthquake at Haywards, would not be much helped, if at all, by contingent storage of water in the bottom of Lake Pūkaki. Mr Coates and Transpower are assuming the benefits of such a reserve would exceed the costs without the sort of analysis necessary to support this view.

78. Mr Coates claims at page 4 in his Technical Note that "while markets are generally the best approach for addressing known risks, they are poorly suited for what are often referred to as 'black swan' events. Events that were unforeseen but have a major impact." He offers no evidence to support this

claim. In fact, the establishment of market approaches to operating electricity systems has often been the policy response to 'black swan' events. He cites the simultaneous low inflows in 1991 and 1992, along with a material miscalculation of thermal fuel supplies, as an example.

79. It was this event that triggered the Government of the day to require the industry to set up a market as it was believed this would better handle such situations. To my knowledge, apart from those caused by equipment failure, there have been no forced outages not caused by Transpower error since the market started.

80. Moreover, in 2011 a major nuclear power plant at Fukushima was inundated by a tsunami triggered by an offshore earthquake. This caused relatively widespread radioactive contamination. The political decision was made to shut down all nuclear stations in Japan as a precaution. These produced approximately 30% of the country's electricity supply. Not long after, the head of the Japanese electricity industry regulator, Professor Hatta, and some colleagues came to New Zealand and discussed at length how to establish a market as they believed one would be able to better manage black swan events than their administrative decision making had done.

81. On page 1 of his letter to Alicia Williams, Mr Coates claims that load cost savings such as Meridian (and Transpower's modeller) estimate "would only be realised by consumers if they purchased their electricity on the spot market. However, given that the vast majority of electricity purchased by consumers is based on electricity prices that are typically fixed a year in advance – and sometimes longer – the commercial benefit of a fall in wholesale price would largely accrue to the main Gentailers …"

82. Most electricity is supplied by retailers to households and small to medium businesses using a fixed price variable volume agreement and these come in two broad types:

> fixed term under which the price is set for the term and the retailer usually sets and charges a break fee if the customer wants to end the contract early and
>
> open plan, which are for no set term and the price can be varied by the retailer giving notice, but the customer is also free to cancel the arrangement and accept an offer from another retailer.

83. While there will be a lag before consumers on fixed term contracts can access lower retail prices reflecting lower wholesale prices, this is not the case for customers on open plans. There is no reliable data on what proportion of customers is on each type of plan, but industry participants suggest open plans are common and increasingly so because of recent market volatility. Moreover, banks found in the late 1980s and 1990s when mortgage rates began to decline sharply in the retail market it proved very difficult to enforce break fees on mortgage borrowers without generating considerable adverse public and customer reaction. I was a director of a bank with a large mortgage business at the time. Electricity retailers would in the event of any material drop in wholesale prices probably face a similar situation.

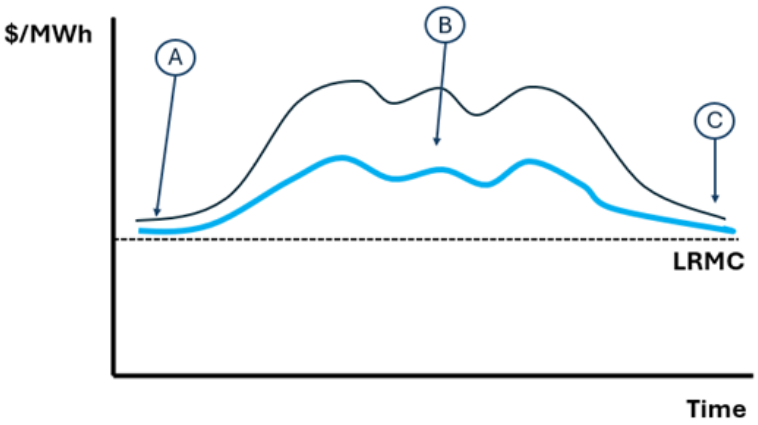
84. In my opinion, Mr Coates has underestimated the extent and speed with which consumers will be able to take advantage of lower prices.

85. I have attached an addendum to my evidence that seeks to assist the Panel by reflecting on the key economic and analytical concepts arising from the evidence.

Dated: 15 April 2026

Thomas Brent Layton

Addendum: Key economic and analytical concepts arising from the evidence.



The shape of the black line is the current spot and forward/futures contract prices today for contracts out for about 5 - 6 years. It is not what prices will be in the future; it is what prices are today for contracts for delivery in the future.

The curve rises sharply from the next winter – this reflects dry year risk - and stays elevated well above Long Run Marginal Cost (LRMC) for 2-4 years. This 2-4 year material divergence between forward/future contract process and the LRMC demonstrate both the motivation for Meridian's application and the reason for its limited duration.

Forward prices for contracts for delivery in about 4 – 6 years are lower than for the next few years and quickly track back to LRMC because it is expected the new generation currently under construction will come on stream.

The shape of the blue line is a stylised version of how this curve will change according to the various pieces of economic evidence provided to the Expert Panel, if the Panel grants Meridian's application for eased access to contingent hydro storage in Lake Pūkaki

Point A: Grant Telfar and John Culy in their modelling focus on spot prices i.e. point A.

John Culy says there is going to be a material but modest movement downwards in spot prices. Grant Telfar says it will be more material.

The difference between these two is partly due to modelling assumptions. There are always subjective judgements behind modelling.

However, another element is understanding of how unrestricted access to the contingent storage will alter Meridian's offering strategy when Lake Pūkaki is **above** the 518 m RL level, which it has been all of the time, and will continue to be virtually all of the time. Breaching the 518 m RL outside its consent would be very costly to Meridian in

the long term, not just in terms of future consents for this and other lakes but also for the "environmentally responsible" basis on which it has built its brand.

I would suggest that Grant Telfar, as Meridian's long-standing internal expert in these matters, knows more about how Meridian's offering behaviour both above and below 518 m RL would change with eased access to Lake Pūkaki contingent storage than almost any analyst or commentator. I note that Mr Blundell also discusses the offer behaviour that Meridian applies to the stored energy below 518 m RL in his evidence. I also know that Meridian's retail competition effort is significantly constrained by uncertainty about hydrology. I have watched it over 25+ years. I would be surprised if Genesis has a different view than me on this. Its concern in its comments goes beyond the impact on Tekapo B.

John Culy also says that most of any move down at point A will be wealth transfers and so not a net economic benefit to New Zealand. Simon Coates says he agrees.

I point out that, when promoting competition, it is less clear cut that these wealth transfer effects should be disregarded. Lower prices are a long-term benefit to consumers if brought about by sustainable competition, and achieving this is central to the way the electricity market is deigned to work, as the Electricity Authority's comments explain.

Point B: In my Report I highlight that a material impact of granting Meridian eased access will be to reduce forward and futures contract prices today. i.e. shift the blue line (i.e. the with consent granted line) downwards even today. These high prices influence commercial and industrial contracts and also residential offers. Restraining them will be of very material benefit to consumers directly and by making it easier for retailers without generation to compete for customers.

John Culy and Simon Coates have not criticised my earlier report on this point. They have ignored it.

MBIE has recently adopted the same approach as I did when evaluating the impact of the Government contracting for LNG importation. Eased access to Pūkaki and eased access to LNG are parallel effects on the electricity market. MBIE used Boston Consulting and Concept Consulting (Simon Coate's firm) in preparing the Cabinet Paper but it is not clear from the documents exactly what role Concept played in the development of this approach to analysis of the effect of easier access of gas on forward premia.

Point C: Forward prices track down towards the LRMC as new generation is expected to come on stream. Surveys of long term electricity contracts undertaken by the Electricity Authority confirm this is the case. Prices that include delivery 5 – 10 years out reflect LRMC and are below forward prices for delivery in the next few years.

The Parliamentary Commissioner for the Environment is concerned that if Meridian is granted eased access, generation building will be delayed or cancelled and this trending

back to LRMC will also be delayed or not occur. Since the new generation will be renewable he is concerned about the “climate change” effect of this delay or cancellation.

I point out that the eased access to 545 GWh in Pūkaki is important for bringing current forward/futures premia back into line but not material in terms of the total generation build underway to meet expected increases in demand.

Brent Layton
April 15, 2026