Submission by



to the

Electricity Authority

on the consultation

Improving incentives for long-duration firming

16 November 2026

Improving incentives for long-duration firming

– SUBMISSION BY BUSINESSNZ ENERGY COUNCIL—

Introduction

1. BusinessNZ Energy Council (BEC) welcomes the opportunity to provide feedback on the Electricity Authority's consultation paper *Improving Incentives for long-duration firming (LDF).* BEC supports efforts to strengthen New Zealand's energy security and reliability while preserving the benefits of a competitive, market-based electricity system.

2. BEC represents a diverse array of leading energy-sector businesses, government bodies, and research organisations dedicated to creating a sustainable, equitable, and secure energy future. As a brand of BusinessNZ, New Zealand's largest business advocacy organisation, we represent the World Energy Council in New Zealand, aiming to shape better outcomes for our wider energy system both locally and globally.

3. Our response is guided by the principles outlined in *A Future Vision of New Zealand's Energy Sector*, which identifies abundant, reliable and affordable energy as a foundation of economic growth, productivity and resilience.

Key recommendations

- Prioritise the most material barriers to investment. In other words, the value gap, uncertain generator revenue, weak purchaser incentives and the mismatch in contract tenor, rather than assuming information or contracting processes are the principal constraints. (See paragraphs 11–14, p. 4.)

- Test whether any technology can provide long-duration firming on an investable basis, and consider technology-agnostic reporting on the window of investable opportunity. Also recognise policy intervention, technology and carbon price risks. (See paragraphs 23–26, pp. 5–6.)

- Establish the scale, timing and duration of the LDF need before intervening, distinguishing seasonal from annual shortfalls and whether the gap may decline within new assets' lifetimes. (See paragraphs 15–18, pp. 4–5.)

- Show that identified information gaps materially affect investment or contracting, and use existing reporting where possible before adding targeted, proportionate disclosure requirements. (See options 1 and 2, pp. 5–6.)

- Develop voluntary, industry-led LDF contracts only where genuine transaction barriers exist, recognising that contract design cannot resolve the gap between seller requirements and purchaser willingness to pay. (See Option 4, p. 6.)

- Coordinate this work with wider energy-security policy, including hydro management, demand response, batteries, renewable build, thermal capability and fuel availability. (See paragraphs 4–10, pp. 3–4.)

- Defer mandatory sell-side auctions unless clear evidence shows that inadequate price discovery is materially constraining efficient contracting, the problem is persistent, and less intrusive technology-neutral measures would be insufficient. (See Option 5, pp. 6–7.)

Context

4. Thermal firming capacity has declined as domestic gas supply has fallen and around 1.2 GW of generation has been decommissioned since 2012. New geothermal, wind, solar and battery capacity, together with industrial demand response, has partly offset this loss. However, cold, calm and dry winters can constrain hydro, wind and solar generation at the same time.

5. In 2024, unexpected gas shortages increased the cost of maintaining security of supply, reflected in Methanex demand response prices. Electricity prices rose for three months, however physical supply security was not severely threatened as controlled hydro storage remained at 1,478 GWh at its low point on 15 August 2024.

6. The Huntly Strategic Agreement shows how prices related to dry-years and fuel-security pressures can be eased. But a balanced mix of flexible, firm and long-duration resources remain essential as weather, fuel availability and demand evolve.

7. Recent analysis, including the Frontier Economics report and Transpower's connection pipeline, shows that investment is concentrated in wind, solar, geothermal and short-duration batteries. More than 200 MW of battery storage has connected to the grid in the past three years, with further projects planned. By contrast, few new long-duration, fuel-stored or dispatchable generation projects are progressing.

8. As electricity demand grows through electrification and new loads, the key issue is not only the volume of investment, but whether the resulting mix can manage dry years, peak demand, grid stability, gas constraints and an ageing thermal fleet.

9. A diverse pipeline of renewable generation, geothermal, batteries, flexible peaking capacity and dependable demand response would reduce exposure to correlated risks while supporting affordability, reliability and sustainability. This is consistent with BEC and EECA's *TIMES-NZ 3.0* whole-of-energy-system modelling, in which renewables provide 93% of electricity generation by 2050 under the Steady scenario and 98% under Shift.

10. Even with this high renewable share, the modelling indicates that thermal firming remains important in dry years, although it operates less often. The market-design challenge is therefore to retain sufficient thermal capability and fuel when operating hours and revenues are lower and less certain. Transpower's draft 2026 Security of Supply Assessment similarly emphasises both timely delivery of the investment pipeline and continued access to adequate thermal generation and fuel.

11. Existing resources could also be used more effectively. Additional wind and solar generation may allow hydro storage to be conserved when conditions permit, strengthening hydro's role as a flexible system buffer alongside large-scale batteries. Market rules and operational tools will need to evolve to support this role and maintain reliable real-time and peak supply.

12. Clear, predictable triggers for using contingent hydro storage would give the market more certainty and help ease shortages of firm and flexible supply. This must be weighed against the risk of depleting reserves in a prolonged period of stress. The Government's 2025 Electricity Market Review found that current settings are unlikely to deliver enough dry-year and firming capacity without change, pointing to uncertain revenues and weak incentives to invest in firm, dispatchable supply.

13. Hydro generators have strong commercial reasons to manage storage prudently. In a severe dry spell, a generator that cannot generate enough to cover its contracts would be exposed to high spot prices, which could strain its liquidity. Knowing that contingent storage is available does not mean it will be used; it simply gives generators clearer expectations of what they can access and how to offer it to the market prudently and efficiently. Alternatively, the concept of contingent storage could be removed and more water made available at all times. Larger storage lakes would reduce dry-year risk and give the market greater certainty.

Broader considerations

A) Proposed options do not address the most material barriers

14. In its consultation paper the EA identifies six main barriers to long-duration firming (LDF), namely the gap between market prices and the value of firming, infrequent and uncertain generator revenue, low liquidity, weak purchaser incentives, limited visibility of existing contracts, and a mismatch between the contract tenor sought by investors and that available from purchasers.

15. While some of the proposed remedies address functioning and transparency of the contract market they seem to not sufficiently address the underlying investment economics and willingness to pay for LDF.

16. The proposed options are largely directed at information, transparency and contracting processes. They do not directly address the value gap, revenue uncertainty, weak purchaser incentives or tenor gap, which BEC considers the more material obstacles to investment.

17. In BEC's view, these are the more significant challenges and should be central to the EA's assessment of whether, and how, intervention could improve the investment case for long-duration firming.

B) Will the LDF gap persist?

18. Another important consideration should be made in regard to the expected decline in LDF. The additional Sapere report prepared for this consultation states:

> *"Under both high demand, high build and low demand, low build scenarios, Sapere estimates the risk of a LDF energy gap in any year will likely reduce by 2032. It may even disappear by 2031 if future demand growth is low. But if we were to experience a severe hydro inflow shortfall, high demand growth and conservative use of hydro storage, the risk of a LDF gap could remain. This finding is broadly consistent with the Authority's own analysis. We modelled the energy balance over three-month periods; seasonal energy shortfalls are more likely than annual shortfalls overall."*

19. If the long-duration firming energy gap is expected to decline over time (and could disappear under a lower-demand pathway), the central challenge is how additional investment now can be economically justified when the need may diminish or disappear within the operating life of the asset.

20. Sapere's results depend heavily on the modelling assumptions. Some scenarios show a substantial surplus of long-duration firming; others suggest a gap in 2027 that narrows thereafter. This raises questions about assuming 1.9% demand growth, which is above recent levels and alongside a fixed supply outlook in which 90% of committed and actively pursued generation is built, with no further investment. In practice, an emerging gap would be reflected in market prices, encouraging additional investment. The market is dynamic, not static.

21. For now, the firming challenge remains, although the context has changed since the 2024 dry year. The Huntly Strategic Agreement have eased near-term concerns about dry-year security and fuel availability. Long-dated electricity futures prices have also fallen from the elevated levels seen during and after 2024. These developments suggest that near-term scarcity risk may be less acute than previously thought, but they do not resolve the underlying issue. The key question is whether the market can deliver and retain the right mix of flexible, firm and long-duration resources to manage future weather, fuel and demand risks.

22. In BEC's view, the EA should therefore test the case for intervention against the scale, timing and duration of the projected need, including the risk that consumers fund long-lived capacity that is rarely used or no longer required. This is particularly important for capital-intensive projects that depend on long-term revenue certainty. BEC believes that Demand response is key which of course requires sufficient compensation for the right to call off load.

C. **Investability and wider investment risks**

23. One potential barrier missing from the EA's analysis is policy intervention risk. Investors in long-lived firming assets must allow for the possibility that a future government or regulator could materially change the investment landscape, for example through direct support for alternative solutions or large-scale intervention such as a Lake Onslow-style scheme. This risk is heightened for solutions with material greenhouse gas emissions, which a future government pursuing a 100% renewable electricity target might seek to displace, and for solutions that depend on being dispatched at prices that may be politically difficult to sustain. To help address this, BEC recommends that the EA acknowledge policy intervention risk as a barrier and consider how greater regulatory and policy predictability could reduce it.

24. Technology risk and ETS/carbon price risk are also significant for long-duration firming investment. Both sit largely outside the EA's mandate, so it is understandable that they are not covered in the consultation paper. However, they affect whether any solution can be financed, and they limit what measures within the EA's remit can achieve. BEC recommends that the EA acknowledge these risks and take them into account when assessing the likely effect of its proposed options on investment.

25. BEC's main concern is that the EA should place more emphasis on investability. The consultation paper considers a range of options to lower barriers, including information, transparency, tools, contracting and incentives. But the more fundamental question is whether any technology can provide long-duration firming on an investable basis, given the infrequency of expected dispatch and the resulting revenue uncertainty. If the underlying business case is not investable, improvements to market settings would have little or no effect on investment.

26. BEC therefore recommends that the EA considers regular, technology-agnostic reporting to identify the window of investable opportunity. This could show the combinations of expected utilisation, revenue and cost that could support an investment decision, and so the characteristics a solution would need to be investable. Known technologies, such as gas peakers and pumped hydro, could then be tested against those characteristics to show whether any is capable of meeting the need. If the long-duration firming need is characterised by very low utilisation and highly uncertain revenue, the fundamental issue may not be information, transparency or contracting arrangements. It may be that no technology has an investable business case, in which case no amount of disclosure, tools or trading mechanisms would resolve it. In that situation the EA should consider whether other approaches, such as demand response, would be more appropriate than measures aimed at stimulating new long-duration firming investment.

Feedback on the EA's Proposed Options

Option 1: Regular reporting on the long-duration firming gap

27. BEC is not convinced that additional regular reporting would provide material information beyond what is already available through Transpower's Winter Energy Margin, Security of Supply Assessment and other market and regulatory sources. The EA has not clearly

identified a material visibility gap or explained how a new reporting regime would improve investment decisions. More fundamentally, reporting would not address the value gap, uncertain generator revenue, weak purchaser incentives or the tenor gap identified above. Furthermore, additional security standard risk confusion and more intervention.

28. Before proceeding, the EA should specify what information is missing, who would use it and how it would change market behaviour. Any reporting should use established methodologies, avoid duplicating existing publications and minimise administrative costs for the EA and market participants. If the EA does pursue regular reporting, BEC recommends it focus on investability, that is, on whether any technology could be investable at the expected levels of dispatch and revenue, rather than on the long-duration firming gap alone (see paragraphs 25–26).

Option 2: Enhanced disclosure obligations

Enhanced disclosure may be justified where genuine information asymmetries are preventing efficient decisions. But the question remains whether disclosure would inform future investment decisions. Yet, greater transparency does not address the investment payback challenge for generators, weak purchaser incentives or the mismatch in contract tenor and, by itself, would not improve the commercial case for long-duration firming.

The EA should therefore demonstrate that material information asymmetries exist and explain how additional disclosure would lead to transactions or investment that would not otherwise occur. Any obligations should be targeted and proportionate.

Option 3: Building blocks for negotiating firming contracts

29. BEC is not convinced that detailed building blocks or extensive guidance are necessary for established market participants. Such material may help smaller participants, but those parties are unlikely, on their own, to contract at a scale that materially changes the long-duration firming investment case.

30. The EA has not established that a lack of contracting expertise is preventing transactions that would otherwise occur. If guidance is developed, it should remain light-touch, principles-based and technology-neutral, without implying a preferred contract structure.

Option 4: Co-development of long-duration firming contracts

31. BEC considers this option to have more potential than the information and guidance measures because it could reduce genuine transaction and contracting barriers. However, excessive standardisation could reduce the flexibility needed to reflect different operational requirements and risk appetites, and contract development should not be treated as a substitute for addressing the more fundamental value, revenue, purchaser-incentive and tenor gaps.

32. Contract design alone would not overcome the underlying difference between the price required by generators and the willingness of off-takers to pay, nor would it close the tenor gap. Any co-development process should therefore be voluntary, industry-led and capable of supporting multiple contract models rather than prescribing a single product.

Option 5: Mandated Sell-Side Auctions

33. BEC is cautious about this proposal and does not currently support progressing it.

34. A sell-side auction could improve price discovery but only if long-duration firming contracts are capable of standardisation rather than needing to reflect asset capabilities and underlying costs. Furthermore, if bids remain above the price purchasers are willing or able to pay, the auction will not produce additional contracting or investment. In that case, the underlying problem would be insufficient willingness to pay rather than inadequate price discovery. Which is entirely rational and economically efficient given the availability of other products for participants to manage risk.

35. Before introducing a mandatory auction, the EA should establish that inadequate price discovery is materially limiting long-duration firming contracts and distinguish that issue from a mismatch between buyer and seller valuations or a lack of buyer need for such products given available alternatives. It should also evaluate the effectiveness of recently implemented reforms and test whether the scale, timing and duration of the projected LDF gap justify a mandatory intervention, particularly where the need may decline within the operating life of new assets.

Conclusion

36. BEC broadly supports proportionate measures that strengthen investment signals and confidence in New Zealand's market-based electricity system. However, the proposed options focus on information, transparency and contracting rather than the more fundamental investment barriers: the value gap, uncertain generator revenues, weak purchaser incentives and mismatched contract tenors. Existing arrangements show that information and contracting barriers can be overcome, including the Huntly Strategic Agreement, the New Zealand Aluminium Smelters demand response agreement, the Meridian and Nova swaption, and smaller-scale demand response options.

37. Long-duration firming may already be sufficient, making the current lack of investment economically efficient. If the market collectively perceived unmanaged risks, futures prices would likely exceed current levels, which are roughly equivalent to the long-run marginal cost of new renewables plus firming.

38. BEC therefore recommends that the EA identify the specific market failure each intervention would address and demonstrate how it would influence contracting or investment decisions. More interventionist measures should proceed only with clear evidence of a persistent, material problem that proportionate, technology-neutral alternatives cannot resolve. The EA should also consider testing whether any technology can provide long-duration firming on an investable basis, taking account of policy intervention, technology and carbon price risks, before concluding that further reducing information or contracting barriers would change investment outcomes.

APPENDIX ONE – BACKGROUND INFORMATION ON THE BUSINESSNZ ENERGY COUNCIL

The BusinessNZ Energy Council (BEC) is a group of leading energy-sector business, government and research organisations taking a leading role in creating a sustainable, equitable and secure energy future.

BEC is a brand of BusinessNZ and represents the World Energy Council in New Zealand. Together with its members, BEC is shaping the energy agenda for New Zealand and globally.

BusinessNZ is New Zealand's largest business advocacy body, representing:

- Regional business groups: EMA, Business Central, and Business South
- Major Companies Group of New Zealand's largest businesses
- Gold Group of medium sized businesses
- Affiliated Industries Group of national industry associations
- ExportNZ representing New Zealand exporting enterprises
- ManufacturingNZ representing New Zealand manufacturing enterprises
- Sustainable Business Council of enterprises leading sustainable business practice
- BusinessNZ Energy Council of enterprises leading sustainable energy production and use
- Buy NZ Made representing producers, retailers, consumers of NZ-made goods

BusinessNZ is able to tap into the views of over 76,000 employers and businesses, ranging from the smallest to the largest and reflecting the make-up of the New Zealand economy.

In addition to advocacy and services for enterprise, BusinessNZ contributes to Government, tripartite working parties and international bodies including the International Labour Organisation (ILO), the International Organisation of Employers (IOE) and the Business and Industry Advisory Council (BIAC) to the Organisation for Economic Cooperation and Development (OECD).

