

Energy sector submission to the Commerce Commission – DPP4 Issues Paper

19 December 2023

Sector participants are committed to collective action to navigate New Zealand's energy transition through the draft *Sector and Government Energy Transition Framework*

The energy sector and the way that Aotearoa New Zealand navigates the global energy transition is critical for New Zealand's prosperity and decarbonisation.

To deliver a decarbonised energy system, the electricity sector will have to undergo transformational investment and sector change of unprecedented pace and scale. This cannot be achieved without a commitment from both the sector and Government to act. We acknowledge the explicit scope and role of the Commerce Commission as regulator, while highlighting the importance of this role as part of the public and private sectors delivering New Zealand's future energy system.

The draft Sector and Government Energy Transition Framework (the Framework) represents the Government and energy sector joining together to create a shared approach and structure to collaborate in transforming and decarbonising New Zealand's energy system. The challenge of decarbonising New Zealand's energy system is complex and will require policy-makers and regulators to work with industry to establish stable policy settings to the benefit of New Zealand. This will provide confidence for industry to invest in distribution, transmission and generation infrastructure at scale and pace, optimising 'whole of system' outcomes for the country.

This submission provides a united energy sector view on key DPP4 issues aligned to the Framework.¹

The regulatory settings under DPP4 will provide a signal about investment for electrification and decarbonisation outcomes - for those directly investing in electricity distribution infrastructure, the wider energy sector, and government, as well as the New Zealand public.

There are important matters of principle underpinning DPP4 aligning to the priority themes of the Framework. The remainder of this submission highlights the priority themes of the Framework and how these are relevant for the DPP4 process and decisions.

Support accelerated renewables development

Investment across generation, transmission and distribution in the 4-5 year period from 2025 is critical for New Zealand's energy future. Investment by EDBs through the DPP4 period will support:

- Renewables development (enabling the network infrastructure to connect new renewable energy to customers)
- Market mechanisms for a growing proportion of renewables (including EDB mechanisms to manage load, and to minimise whole-of-system costs).

Scale up efficient transmission and distribution network investment

Addressing investment incentives and funding for efficient transmission and distribution network enhancements, expansion, and non-network alternatives is crucial to support the transition.

There is widespread recognition that the scale of the investment challenge facing the electricity sector over the coming decades is unprecedented – in particular investment in transmission and distribution network infrastructure. The Commerce Commission's acknowledgement that the size of investment is significantly larger than in the past and an adapted capex forecasting approach is required - must be fully facilitated in the DPP4 allowances and approach.

In the modelling undertaken for sector participants in 2022, BCG and Concept estimated in the 2020s alone operational and capital expenditure of \$22 bn on distribution network infrastructure, and \$8 bn on

¹ Industry participants that have been progressing sector-wide discussions and that express support for this letter include Clarus, Contact Energy, Electricity Networks Aotearoa, Electricity Retailers' Association New Zealand, Far North Solar Farm, Flick Electric, Gas Industry Co, Genesis Energy, Helios Energy, Independent Electricity Generators Association, Lodestone Energy, Manawa Energy, Mercury, Meridian Energy, Nova Energy, Orion, Powerco, Top Energy, Transpower, Unison Networks, Vector, Wellington Electricity.

transmission networks. Over the subsequent two decades to 2050, total investment in transmission and distribution networks is estimated to be \$70 bn.²

The vast majority of the anticipated increases in EDBs' allowable revenues anticipated for DPP4 result from changes in the input parameters for the Commerce Commission's cost of capital calculations – such as increases in the risk-free rate. These are entirely independent of any increases in investment required, and were not included in BCG and Concept's estimates.

There are considerable investment uncertainties in the period 2025-30. As well as forecasts (reflected in Asset Management Plans), an increased level of flexibility is required to respond to challenges and changes through the DPP4 period, rather than always (as historically) relying on separate CPP or reopener processes when circumstances change. Given the step changes in investment required, and the sea changes in system operation anticipated, historical information is not the appropriate measure of the nature and scale of future capex and opex.

Support people and the workforce

The Issues Paper identifies that the tension between consumer price shocks and supplier financeability (page 52). As an industry we are equally concerned about both of these effects. We support the Commerce Commission identifying robust measures for both consumer price shocks as well as assessing supplier financeability. We encourage the Commerce Commission to engage with the Sector on this early and promote broad discussion on the topic.

Consumer impact of the broader energy transition needs to be transparent, well-communicated, and appropriately supported. Part of that is understanding retail price impacts in the context of the 'energy wallet'³, and understanding the risk of underinvestment in transmission and distribution networks which could have even higher cost and price impact for consumers in the longer term.

It may not be possible to resolve this tension between price shocks and financeability. If this were to occur, solutions outside DPP4 are likely required which the Commerce Commission should be open to. Commerce Commission transparency with the sector on the financeability assessment will be important to support collaboration in communications with consumers.

The Issues Paper recognises (page 152) that the required level of investment in the DPP4 period will create deliverability challenges, such as sector workforce capacity. BCG highlight that a significant increase in skilled workforce across the electricity value chain is required to deliver the required investment. It is a priority for the sector to work with government on initiatives to improve workforce capacity to deliver on the transition and allowances for the period will also need to reflect this challenge.

Drive electrification at pace

The electricity sector can enable rapid decarbonisation of the energy system. Levels of EDB investment are core to driving electrification through ensuring EV charging infrastructure can be successfully rolled out and electrification projects for households, businesses and large-scale initiatives can be implemented, encouraging load flexibility where possible.

Under BCG's preferred decarbonisation pathway, *Smart System Evolution*, the 2020s will be a critical decade for the electricity sector and Aotearoa's transition to net zero carbon. By 2030, this pathway is expected to save \$1.9 billion in total system costs, and reduces average annual household bills by \$70. With decisive, early action supported by the right policy, regulatory, and market settings, the process of electrification can reduce Aotearoa's emissions by 8.7MtCO₂ per year by 2030 with further reductions to 22.2MtCO₂ per year by 2050. BCG's preferred pathway, ensures emissions reductions at the lowest total system cost, the most affordable household energy bills, and reliable electricity supply.⁴

² BCG (2022). *The Future Is Electric: A Decarbonisation Roadmap for New Zealand's Electricity Sector*. Pages 9&17. Available online at <https://www.bcg.com/publications/2022/climate-change-in-new-zealand>

³ Electricity Networks Aotearoa commissioned Sapere to examine the impact of electrification on the overall consumer 'energy wallet': *Total Household Energy Costs NZ* (<https://www.ena.org.nz/resources/electrification-of-nzs-energy-needs/document/1231>). Their analysis showed that even with the increased investment in electricity infrastructure and increased consumer electricity consumption, consumers are still likely to save hundreds of dollars per year on their bills across all energy consumption (including gas and transport fuels).

⁴ BCG report (above), page 10.

Enable a smart electricity system

DPP4 should enable the 'smart system' to maximise the efficient use of existing infrastructure, to minimise future infrastructure investment, reducing whole-of-system costs and therefore delivering better consumer outcomes. As penetrations of DER increase, and participation in the wholesale market by these network-connected resources increases, network investment and distribution system operation will become inextricably linked with energy market costs to consumers. Our changing energy system reinforces the need for DPP4 to be forward looking and flexible, with historical information not being the appropriate reference for the nature and scale of future capex and opex.

The potential value that can be unlocked by enabling a smart electricity system is significant. BCG suggests that a 'smart system' could save around \$10 billion in costs on a net present value basis to 2050, and investment in smart technologies could unlock at least 2 GW of distributed flexibility by 2030, and 5.8 GW by 2050.⁵

The capability to fully unlock the smart system is still emerging. This means that networks may need to rely on more manual, targeted means of flexibility, and flexibility-enabling solutions, in the near term. The transition will likely become easier as the cost of technologies like lithium-ion batteries, smart EV chargers, long-duration storage, zero-emissions generation and smart system enablers decline.

A smart electricity network will improve resilience and adaptation to the effects of climate change. DPP4 must accommodate necessary investments to support resilience in networks. While EDBs prioritise investment based on recognised processes of risk assessment and standards relevant for resilience⁶, it is acknowledged that there are government policy reviews underway which may alter expectations about how resilience investment is determined. There will be a need for flexibility in DPP4 (such as potential reopeners or a project review mechanism) for the Commerce Commission and EDBs to respond to policy changes which materially impact DPP4 allowances.

The Commerce Commission acknowledges in the Issues Paper that the current approach to incentivising innovation in regulations can be improved (page 47). Encouraging innovation, fostering creativity and facilitating non-traditional solutions will play a big part in decarbonising the energy sector while ensuring ongoing consumer choice and control. DPP4 can provide improved approaches to encourage innovation, while maintaining competition. We support the Commerce Commission workshopping with the sector on options for incorporating 'innovation and non-traditional solutions' into DPP4 (page 48).

A smart resilient electricity system is expected to minimise future whole-of-system costs to consumers (both investment and operational costs) and improve the ability of the system to adapt to the effects of climate change.

Encourage the right energy and capacity mix

Supporting the interconnection between gas, electricity and other fuels in achieving a resilient transition will enable the right energy and capacity mix during the transition. The link between availability of gas and the electricity network capacity required, is one element in forecasts for DPP4.

Supporting the Framework and DPP4 considerations

The parties to this letter would be happy to discuss the draft Sector Framework and the points above with you. This submission does not contain any confidential information and can be published on the Commerce Commission website unaltered.

⁵ MBIE, *Measures for Transition to an Expanded and Highly Renewable Electricity System*, paragraphs 93

⁶ EDBs have tested maturity in their consideration and planning for resilience – through the EEA Resilience Guide ([Resilience Guide 2022 \(eea.co.nz\)](https://www.eea.co.nz/resilience-guide-2022)).