Tesla New Zealand ULC
5 Ngauranga Gorge Rd
Wellington
New Zealand

31 July 2025

Re: Tesla submission on Battery Energy Storage Systems Roadmap

Thank you for the opportunity to make a submission on the Battery energy storage systems roadmap. Batteries are a crucial part of New Zealand's electricity future and it is good to see regulators paying attention to enabling them. However, this is a not a complete solution, and the New Zealand Government also needs to look at Australian policies that are tackling upfront cost barriers.

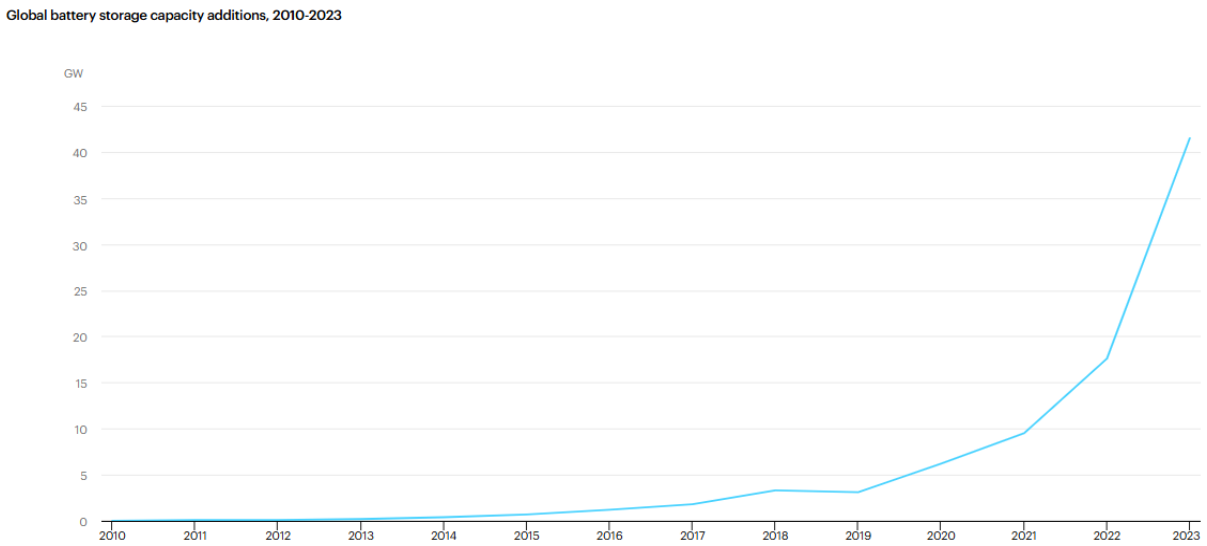
Growing battery storage to ensure affordable, secure electricity supply
New Zealand's energy sector faces mounting challenges, underscored by recent high electricity prices and Energy Minister Simon Watts' warnings of an energy shortage.

The 2024 winter saw wholesale electricity prices spike to $853.57/MWh, driven by low hydro lake levels, reduced wind generation, and a critical decline in natural gas supply. These conditions forced industrial users to curtail production, with some, like Winstone Pulp, closing operations due to unaffordable energy costs.

Transpower's 2025 Security of Supply Assessment (SOSA) emphasises the growing risk of generation capacity shortages as gas generation wanes and electricity demand grows. There is particular risk during peak winter demand, which coincides with lower generation from solar. Most new generation in the pipeline is solar.

Batteries time-shift renewable generation —storing electricity when supply is abundant and dispatching it during when renewable generation cannot match demand peaks—mitigating price spikes and reducing reliance on fossil fuel-based peaking plants.

There is an urgent need to accelerate the installation of both home- and utility-scale battery energy storage systems (BESS) to enhance energy security and affordability. They are set to be indispensable to meeting electricity demand through intermittent generation.
Globally, installation of batteries is growing exponentially.



New Zealand lags internationally. Only 2% of households reported having batteries in the April 2024 EECA consumer survey and only 135 MWh of BESS is operational, against peak demand that can exceed 7,000MWh. Transpower reports there are 2,500 MWh of battery projects in the pipeline, compared to 1,000 MWh in 2024. However, many of these projects are at very early stages and it is unclear when or if they will proceed.

To accelerate installation, streamlined consenting, removal of regulatory hurdles, and investment incentives for home- and utility-scale and batteries are needed.

New Zealand making progress on improving policy

New Zealand's regulatory system for rooftop solar and BESS is under-developed but there is positive progress. Tesla welcomes the Electricity Authority's decision to require large retailers to offer power plans with different on- and off-peak rates, and the decision to require distributors to pay rebates for supply of electricity from consumers at peak times help to improve the economics for investment in small-scale batteries.

The Electricity Authority's Battery energy storage system regulatory roadmap is a positive development, showing a willingness to move at good pace to get regulations in place to better enable both small-scale battery systems and utility-scale batteries, as well as virtual power plants. We look forward to engaging with the proposed regulatory changes as they are made public. We would impress upon the Government to hit the ambitious timelines in the roadmap, and preferably beat them, to keep up with the pace of change and the need for greater battery capacity.

The missing factor is still support with the upfront investment cost.

Australian policies New Zealand could adopt

Australia's very strong uptake of distributed solar generation is contributing to a need for batteries for time-shifting generation so solar generation does not go to waste and demand peaks can be met without fossil fuel generation.

While batteries are getting cheaper and the cost savings make the investment worthwhile, the capital cost remains a barrier for many households. While a third of Australian households have solar, only 8% have batteries. New Zealand has the opportunity to learn from successful Australian policies addressing this issue.

The Australian government's Cheaper Home Batteries Program offers 30% subsidies on small-scale battery installations (5–100 kWh). The aim is for one million installations in households, businesses, and community facilities by 2030, reducing upfront costs of battery installation and enabling customers to save ongoing electricity costs, while taking pressure off the grid. Complementary state-level include subsidies that are additional to the federal subsidy and no-interest loans. By incentivising or requiring Virtual Power Plant integration, Australia aims to maximise the impact of distributed storage, potentially saving $1.3 billion annually in wholesale power prices.

Australia has also recognised the need to accelerate utility-scale battery installation. The Federal Government's Capacity Investment Scheme is a revenue underwriting scheme that works by a series of tenders for battery and renewable generation projects. Along with state initiatives, CIS has so far under-written 3.9GW of battery projects.