

POWERED FROM WITHIN

New Zealand-Made Energy for New Zealand Security

A framework for the investments and better decisions that will keep New Zealand's essential services, supply chains, and food systems running through future fuel disruptions, investments that pay for themselves even if disruption never comes.

Why This Matters Now

The current disruptions to global trade and fuel supply chains, driven by geopolitical realignment, conflict, and economic nationalism, have opened New Zealand's eyes to a vulnerability we have long ignored.

This is a rare moment of clarity.

Historically, nations that act on these moments build lasting resilience; those that wait for the next crisis to pass find themselves making the same regrets a generation later. Critically, every investment proposed in this framework is 'no regrets': electrifying our critical fleet, installing solar on hospitals, and transitioning school heating will save money, reduce operating costs, and increase productivity whether or not a fuel disruption ever occurs.

We do not need a full-blown disaster to justify acting - the economics already stack up. Which raises the question: why wait?

Why This Will Matter in the Future

The current crisis is a wake-up call, not an isolated event.

The forces that create fuel supply risk are intensifying. Geopolitical conflict, climate-driven disaster, pandemic, economic nationalism, and the accelerating energy transition itself, are not diminishing. A conflict disrupting Middle Eastern or refinery output in Asia, a major climate event severing Pacific shipping lanes, or a rapid shift in global oil markets could each trigger a supply shock with little warning.

New Zealand's geographic isolation, which is an asset in many respects, becomes a critical liability in a fuel emergency.

The question is not whether another disruption will come, it is whether we will have acted before it does.

NZ-MADE ENERGY = NZ SECURITY

New Zealand's dependence on imported liquid fuels represents one of the most significant and underappreciated risks to national security and public wellbeing. Unlike many vulnerabilities, this one is directly addressable: the technologies, vehicles, and systems required to dramatically reduce our fuel exposure exist today and are commercially viable. However, electric alternatives and switching to these machines may cost more upfront, and face other barriers to adoption that slow their spread.

This is where well-designed government action matters most.

The Prize: Spend Once, Save Forever

Many of the recommendations will cost the government in the short term, but they will save money in the medium and long term, build world-leading economic resilience and productivity along the way. This isn't frivolous spending; it is investment in assets that pay dividends for decades, with returns far exceeding the upfront cost.

The evidence is already running on New Zealand roads, roofs, and water: the solar on a major hospital pays for itself in five to seven years and then provides free energy for the next 20 years; the battery beside it is bought for resilience, and over its life costs about the same as the diesel generator infrastructure it displaces. School solar pays back in five to seven years. An electric ambulance costs somewhat more than a diesel one to buy and a quarter as much to run, repaying the difference many times over its service life. The world's first electric tug operates in Auckland at less than a third of the cost of its diesel twin. An electric vehicle running on New Zealand-made energy can save its owner tens of thousands of dollars over its lifetime.

Scaling that logic across the whole country, the numbers become transformational. New Zealanders currently spend roughly \$40 million every single day buying fuel. Full electrification of New Zealand's homes would save approximately \$29 million per day by 2040, money that stays in New Zealand, circulating through local wages, local firms, and regional economies instead of departing on a tanker.¹ Every year of delay is roughly \$10 billion sent overseas; every year of progress converts a slice of that outflow into permanent domestic value.

And the prize is bigger than money. New Zealand starts with an advantage few other countries have: an electricity system already among the most renewable on earth, world-class wind, hydro and geothermal resources, and proven local innovation from electric ferries to electric rubbish trucks. No nation is better positioned to become the first whose hospitals, emergency services, schools, food system, and freight backbone can run indefinitely on energy made at home. This approach buys not just protection from the next fuel shock, but a permanent structural upgrade to the New Zealand economy, cheaper to run, cleaner, more productive, and impossible to blockade. Countries spend fortunes on security they hope never to use. This is security that pays for itself whether the crisis comes or not.

¹Rewiring Aotearoa, The Electrification Opportunity Report and 'Release the Pressure' (Watt Now, August 2026): daily national fuel spend approximately \$40 million in normal conditions (exceeding \$60 million during recent shocks); estimated household savings from full electrification of New Zealand's homes and household machines approximately \$29 million per day by 2040.

This document provides a framework for government to prioritise, enable, and more fully value the investment, public and private, that fuel security requires, across seven mutually reinforcing pillars:

- **Pillar 1: Electrify Crown-Owned Assets.** Direct electrification of government-owned vehicles, facilities, and backup systems, from emergency vehicles to hospital generators to school boilers, corrections, courts, and government vehicle fleets. Every replacement decision should be “electric-first”: no new fossil fuel purchase unless there's no electric option available that economically stacks up over the lifetime of the asset.
- **Pillar 2: Local Government & Public Transport.** Requiring and supporting councils to electrify public transport fleets, Emergency Community Hubs and council facilities, and essential local services such as wastewater and waste collection.
- **Pillar 3: Critical Private Infrastructure.** Funding support and regulatory incentives to electrify privately-owned but nationally essential services, including: ambulances; food production, processing and distribution; critical logistics fleets, and other essential freight; and resilience for telco backup power.
- **Pillar 4: Essential Workers' Personal Transport.** Active government support to help essential workers (nurses, paramedics, teachers, tradespeople) to electrify their own vehicles, reducing their personal fuel dependency and strengthening the human component of our critical services.
- **Pillar 5: Charging Infrastructure.** Building the national charging backbone that keeps every electric fleet moving, from heavy freight charging hubs on priority routes to depot, workplace, and marine charging. These should be designed as resilience infrastructure with battery buffering and bidirectional capability.
- **Pillar 6: Value Fuel Security Properly.** Reforming Treasury and cost-benefit frameworks so that reduced exposure to overseas fuel insecurity is recognised and valued as a recurring contingent liability removed, fixing the mis-accounting that currently biases investment decisions against resilience.

The framework also addresses the fuel that remains: protected priority access, aligned with the Government's Fuel Response Plan 2026, for uses that cannot yet be electrified, such as Cook Strait ferry services and essential aviation, and it shows how electrification transforms the reserve arithmetic, so existing storage stretches toward a 60-day reserve for critical uses.

Drawing on Rewiring Aotearoa's national machine count data² and supply chain resilience lessons from the COVID-19 pandemic and other crisis responses, this document demonstrates that the transition is not only technically feasible but fiscally prudent. The cost of electrifying our critical infrastructure is a fraction of the economic damage a sustained fuel shock would cause. Nor is this untested ground: China treats electrification as core energy security strategy and industrial policy, the EU cut Russian gas dependency from 45% to 12% in three years, Ukraine's solar-and-battery hospitals have kept functioning under missile attack, and the US Army is putting a renewable microgrid on every base by 2035.

²Rewiring Aotearoa, The Machine Count: New Zealand's First Complete Inventory of Fossil Fuel Machines, May 2025. Available at rewiring.nz/machine-count. Developed in partnership with Ara Ake and EECA.

HEADLINE RECOMMENDATIONS

The clock starts now

Take immediate action by ministerial decision. The following key decisions can be actioned within several months, without waiting for a Budget or a new appropriation.

1. Designate a lead Minister for Energy Security and Resilience.
2. Require the Officials' Committee for Domestic and External Security Coordination (ODESC) to advise on action that actively reduces New Zealand's fuel supply exposure, not just respond once a crisis hits.
3. Direct every government vehicle and machine replacement to default to electric, starting today.
4. Set a 60-day fuel reserve target.
5. Assure school communities that if they invest in solar, they will get to keep the money they save.

Fund the backbone

Commit the money in the next Budget to electrify and provide resilience to NZ's economy.

1. Establish a Critical Infrastructure Energy Security Fund.
2. Fit the ten highest-priority hospitals with solar and batteries.
3. Fund solar and batteries for priority Community Emergency Hubs and Emergency Operations Centres.
4. Enact EV Salary Boost in the next tax bill.
5. Zero-rate (or significantly discount) Fringe Benefit Tax for electric vehicles.
6. Scale up EECA's heavy vehicle charging pilot into a planned national network, starting with design and consenting for an Auckland to Wellington freight charging network.

Much of this isn't new spending, it's capital that government agencies were already going to spend, redirected to electric, and fuel and generator budgets converted into the investment that eliminates the need for them.

Assess the risks, and fix the rules

In the next 12 month:

1. Require the Treasury to assess the fuel security impact of major policy and funding decisions.
2. Publish the National Fuel Prioritisation Protocol and commence implementation for fuel users now.
3. Assess risks from fuel disruption for food production, processing, and distribution.
4. Set a 72-hour backup power standard for critical telecommunication systems.
5. Change the rules for grid upgrades so first movers (converting from fossil fuels or installing large-scale charging infrastructure) are not unreasonably penalised.

Scale what works...

Extend the priority-site programmes to full coverage, and bring public transport into the electrification effort.

1. Fit the 20 largest hospitals with solar and batteries.
2. Fit every public school that's a Community Emergency Hub with solar and batteries.

3. Extend solar and battery support to all Community Emergency Hubs and Emergency Operations Centres.
4. Electrify public transport.
5. Get the Auckland to Wellington freight charging network operational.

...and make sure it's tracked and protected

6. Publish a quarterly National Energy Security Dashboard, tracking risk exposure and progress on demand reduction across every portfolio.
7. Give MBIE's critical supply chains function an explicit requirement to act on emerging energy and fuel security risks.
8. Require critical logistics fleets to develop fuel contingency plans now, not only once Phase 4 is triggered.
9. Direct the Treasury to recognise fuel supply dependency as a standing risk in the Statement of Specific Fiscal Risks at every Economic and Fiscal Update, with an estimated fiscal cost range.

Finish the job

In the next ten years, every public hospital and school should have solar and battery backup, every Emergency Operations Centre should be able to operate independently of the grid, and critical freight should be able to move around the country if there is a significant fuel disruption.

1. Fit every public hospital with solar and batteries.
2. Fit every public school with solar and batteries.
3. Require every Emergency Operations Centre to have solar and batteries.
4. Support mode shift for freight to rail.