the exponential agency

v3 · May 2026

COMPANION TO AOTEAROA'S ENERGY PROSPERITY

Electricity Policy Kick-start.

18 policies for the next government — 16 across the Six Energy Transition Battles plus two cross-cutting cross-cutting reforms. $2.0 billion of direct government spend mobilises $9.7 billion of total investment investment over five years.

The destination is a household energy bill that's a third to two-thirds smaller..

DIRECT COST / 5Y	CAPITAL MOBILISED	MULTIPLIER
$2.0b	$9.7b	4.84×
Government appropriation	Total investment unlocked	Per $1 of govt spend

— EXECUTIVE SUMMARY

18 policies. $2.0 b of spend. $9.7 b mobilised.

The Vision document set the destination to reduce household energy bills by a third to two-thirds. This document sets out the policies that get us there: 16 policies organised across the Six Battles of the energy transition, plus two cross-cutting reforms that decide whether the transition lands equitably and whether the regulator can see it happening. Some can be in market within 12 months. The structural reforms need 18 to 24. The benefits compound when adopted together.

5-YEAR DIRECT COST	CAPITAL MOBILISED	MULTIPLIER	RENEWABLE BUILD
$2.0b	$9.7b	4.84×	~2.1 GW
Government appropriation	Public + private investment	Total investment per $1 of govt spend spend	New generation enabled

STORAGE	FLEET EVS	INDUSTRIAL HEAT	EQUITY-TARGETED HOUSEHOLDS
~1.6 GWh	35,000	~10 TWh	~45k
New battery storage enabled enabled	Commercial + government fleet fleet	Fossil heat displaced /yr	Beyond Battle 1 financing reach reach

How the package is structured

Battle 1 (Electron Supply): five policies that turn the residential rooftop, the public-sector roof, the government's electricity procurement, and the grid-scale battery pipeline into a coordinated build-out of around 2 to 3 GW of generation and 1.5 to 2 GWh of storage over five years.

Battle 2 (Useful Work): four policies that move fleet electrification from "happening but slowly" to a managed to a managed transition with public infrastructure, fleet incentives, autonomous-vehicle readiness, and the readiness, and the government's own fleet leading by example.

Battles 3, 4, 5 and 6: two policies each on industrial heat, flexible-load demand, wholesale and distribution price reform, and an open coordination layer above the meter — locking the transition's architecture before incumbents capture it.

Cross-cutting reforms: an equity package for the households Battle 1's financing instruments can't reach, and a regulatory measurement reform that shifts the EA from counting connections to measuring real market share.

— SEQUENCING

Land the fiscally-light policies first. Structural reforms in parallel.

The 18 policies are deliberately staged across the 5-year programme. Near-term financing instruments build political and operational momentum. Heavier structural reforms run in parallel and land in years 2 to 3.

Implementation phasing across 18 policies

Design / stand-up · Deployment / active build · Mature / operational

POLICY	BATTLE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1. Solar Lending Facility	B1					
2. Residential VPP Batteries	B1					
3. Public-Sector VPP Batteries	B1					
4. Government PPAs (firmed)	B1					
5. Grid-Scale BESS	B1					
6. Fleet TaaS Incentives	B2					
7. Road Automation Programme	B2					
8. EV + Charger Network	B2					
9. Government Fleet Electric	B2					
10. Industrial Heat Finance	B3					
11. High-Temp Heat R&D	B3					
12. Flexible-Load Incentives	B4					
13. Wholesale Market Reform	B5					
14. Distribution Pricing + Thermal Backstop	B5					
15. Open Coordination Standard	B6					
16. Open APIs as Connection Condition	B6					
17. Equity Package	X-cut					
18. Regulatory Measurement Reform	X-cut					

The Exponential Agency, Electricity Policy Kick-start v3 (April 2026)

01

BATTLE 1 · ELECTRON SUPPLY · 5 POLICIES

A coordinated supply-side build-out.

The Solar Lending Facility opens the residential rooftop. VPP batteries turn the fleet the fleet into peak-shaving capacity. Government PPAs underwrite new utility-scale utility-scale renewables with co-located firming. Grid-scale BESS adds the inertia and inertia and reserves the system needs. ~2 to 3 GW of new generation; 1.5 to 2 GWh to 2 GWh of new storage.

01	**Residential Solar Lending Facility**	cost-neutral	$2.88b
02	**Residential Batteries for VPP**	$135m	$575m
03	**Public-Sector VPP Batteries**	$130m	$130m
04	**Government PPAs (firmed)**	cost-neutral	$1.7b
05	**Fast-tracked Grid-Scale BESS**	$85m	$275m

BATTLE 1 · ELECTRON SUPPLY • RESIDENTIAL GENERATION

01 Residential Solar Lending Facility.

A government-backed lending facility offering 10-year term loans for residential rooftop solar at OCR + 2% (~5%). Target: 10% of NZ households (~206,000) over 2 households (~206,000) over 2 years. Cost-neutral; principal and interest repaid by the household. Rewiring Aotearoa's RAS scheme is the leading complementary or leading complementary or substitute mechanism.

DIRECT COST (5Y)	CAPITAL MOBILISED	GENERATION ENABLED	HOUSEHOLD SAVING
Cost-neutral	**$2.88b**	**~1.4 GW**	**$1,762/yr**
Lending facility, not subsidy	206k × $14k systems	Rooftop solar, 7 kW avg	Net of loan repayments

DIRECT GOVERNMENT COST

Cost-neutral to the operating budget. The facility facility lends rather than subsidises: principal and principal and interest are repaid. **OCR + 2%**

2% covers admin, cost of capital, and a default default provision — programme is self-sustaining.

Structure: government provides a guarantee, guarantee, private market does the lending using lending using KiwiSaver, NZ Super Fund, and and institutional capital. If private funding doesn't doesn't arrive at OCR + 2%, government stands stands up its own.

CAPITAL MOBILISED

206,000 households × $14,000 fully-installed 7 installed 7 kW system = $2.88 billion over the 2-the 2-year deployment.

This scale of demand drives installation costs costs further down as installers achieve sales sales pipelines and procurement economies. The economies. The lending facility itself doesn't doesn't subsidise; it removes the up-front capital capital barrier that currently blocks owner-occupier adoption.

LEGISLATIVE & REGULATORY PATHWAY

No changes to the Electricity Industry Act 2010 2010 or RMA 1991. Standard budget appropriation; administration housed within within Kāinga Ora, EECA, or a purpose-built built Crown-owned company.

Facility live within 6 to 9 months. First loans within 12 months. EA monitors wholesale and and retail impacts; ComCom reviews network network settings.

MACROECONOMIC IMPACT

Cost of living: **~$1,762 net annual saving** per participating household in year one (7 kW system, 10,200 kWh/yr displacing $0.35/kWh, against $14k loan at 5% over 10 years).

Jobs: 2,000 to 3,000 FTE-years across installers, installers, electricians, and admin. *GDP:* after 10 after 10 years, **~$360m/yr of household disposable income** recycled domestically.

BATTLE 1 · ELECTRON SUPPLY • DISTRIBUTED STORAGE

02 Residential Batteries for VPP participation.

A subsidy for residential and commercial batteries, conditional on mandatory VPP participation. Higher subsidies in EDB areas where the network needs more peak network needs more peak flexibility. Target: **50,000 residential batteries over 5 years**.

DIRECT COST (5Y)	CAPITAL MOBILISED	STORAGE	PEAK SHAVING
$135m	**$575m**	**600 MWh**	**250 MW**
30% subsidy avg $2,700/hh	+$440m household co-invest	50,000 × 11.79 kWh avg	Aggregated VPP discharge

DIRECT GOVERNMENT COST

NZ-anchored battery cost trajectory ($900/kWh ($900/kWh in 2025, falling 15%/yr): avg 11.79 11.79 kWh system in 2026 ~$9,000, falling to to ~$5,500 by 2030. A **30% subsidy averages averages ~$2,700/household** across the programme. **50,000 × $2,700 = $135m over 5 years.** Higher Higher subsidies in EDB areas with peak constraints direct spend to where batteries deliver highest system value.

CAPITAL MOBILISED

$135m of subsidy mobilises ~ **$440m of household co-investment** , totalling **~$575m ~$575m** over 5 years.

The aggregated 600 MWh fleet operates as a as a grade-A asset under VPP coordination — — peak-shaving capacity that would otherwise otherwise need new centralised plant or transmission upgrades.

LEGISLATIVE & REGULATORY PATHWAY

Subsidy is a fiscal measure requiring budget budget approval, no primary legislation. Mandatory VPP participation requires **EA amendments to the Electricity Industry Participation Code 2010** to define aggregator aggregator roles, technical standards and consumer protections. 12 to 18 month regulatory undertaking. Sapere/EA Multiple Trading Relationships work work (Jan 2026) is precedent.

MACROECONOMIC IMPACT

Cost of living: aggregated VPP discharges during system stress, lowering wholesale prices for all consumers. Sapere values distributed storage at **$241/kW/yr avoided infrastructure** plus $118/kW/yr offset thermal peaking.

Jobs: 500 to 800 FTE-years across installers, technicians and aggregator engineers. *GDP: GDP:* creates new distributed-flexibility grid grid infrastructure.

BATTLE 1 · ELECTRON SUPPLY • PUBLIC SECTOR

03 Public-Sector VPP Batteries.

Government-funded batteries on schools, hospitals, marae, libraries, and municipal buildings — fully integrated into a government-controlled VPP. government-controlled VPP. Public sector demonstrates the model at scale, generates revenue, builds operational expertise. Target: **20,000 sites** Target: **20,000 sites with 50 MW combined output**.

DIRECT COST (5Y)	CAPITAL MOBILISED	AGGREGATE OUTPUT	VPP REVENUE
$130m	**$130m**	**50 MW**	**$15m/yr**
Mostly capex	100% gov-funded	20,000 sites avg 2.5 kW	Wholesale + ancillary

DIRECT GOVERNMENT COST

Capital cost ~$120m for 20,000 sites at average 6 average 6 kWh per site (2026 prices, falling). Add falling). Add ~$10m for control software, monitoring, and operational integration. **Total Total ~$130m over 5 years.** Funded through Crown infrastructure programmes; recoverable over 10 to 15 years years through VPP wholesale and ancillary services revenue, plus avoided peak energy costs energy costs at the host site.

CAPITAL MOBILISED

$130m of state capital , fully government-funded. The strategic value lies less in private private leverage than in proving the VPP model: model: government as anchor tenant for distributed flexibility.

Operates on standard procurement timelines: timelines: design + tender within 6 months, months, deployment over 30 to 36 months, full months, full VPP integration by year 4.

LEGISLATIVE & REGULATORY PATHWAY

No primary legislation required. Procurement Procurement under existing government infrastructure programmes. VPP integration uses integration uses the same EA Code amendments amendments stood up for Policy 02. Public-sector deployment can run in parallel with parallel with private rollout — the government government doesn't need to wait for full Code Code reform to install on its own assets.

MACROECONOMIC IMPACT

Cost of living: indirect — VPP discharges during peaks lower wholesale prices for all consumers. *Public services:* backup resilience for hospitals, schools, marae during outages.

Jobs: 800 to 1,200 FTE-years in installation, integration, and ongoing operations. *GDP:* ~$15m/yr revenue stream that offsets capex over capex over time.

BATTLE 1 · ELECTRON SUPPLY • UTILITY-SCALE GENERATION

04 Government PPAs (firmed) for new renewables.

The Crown enters long-term Power Purchase Agreements with new utility-scale wind and solar projects, requiring co-located firming (BESS or firming (BESS or thermal). Provides bankable revenue streams to unlock private capital for ~1.5 GW of new generation that wou ld otherwise stall on would otherwise stall on offtake risk.

DIRECT COST (5Y)	CAPITAL MOBILISED	NEW GENERATION	DEMAND SHARE
Cost-neutral	**$1.7b**	**~1.5 GW**	**~10%**
PPA, not subsidy	Private build cost	Wind + solar, firmed	Of NZ electricity demand

DIRECT GOVERNMENT COST

Cost-neutral on a long-run basis. Crown signs signs PPAs at strike prices that reflect long-run run marginal cost of new firmed renewables — renewables — typically below current peak wholesale prices over a 15- to 20-year horizon. horizon.
Short-term price exposure (years 1–3) may produce small net costs or net revenues depending on wholesale conditions. Treasury Treasury manages exposure as a portfolio.

CAPITAL MOBILISED

~1.5 GW of new firmed renewable generation at generation at $1.1–1.2m/MW for wind/solar plus wind/solar plus firming = approximately **$1.7 $1.7 billion of private capital** mobilised against against zero direct Crown spend.
The PPA is the unlock: lenders price project debt debt against contracted revenue. Without long- long-term offtake certainty, projects stall at at financing.

LEGISLATIVE & REGULATORY PATHWAY

No primary legislation. Procurement framework framework via Treasury and the Electricity Authority. PPAs use standard commercial contract law. Awarded by competitive tender; tender; reverse auction is the leading design. design.
FastTrack consenting (existing) accelerates project delivery. RMA processes remain the rate- the rate-limiting step on individual sites — separate but parallel reform agenda.

MACROECONOMIC IMPACT

Cost of living: 1.5 GW of new generation directly suppresses wholesale prices, particularly during shoulder periods. Firming requirement neutralises intermittency concerns.

Jobs: 4,000 to 6,000 FTE-years construction; 200 construction; 200 to 400 ongoing operations. operations. *GDP:* $1.7b of investment plus long- long-tail productivity from cheaper energy. energy.

BATTLE 1 · ELECTRON SUPPLY • GRID-SCALE STORAGE

05 Fast-tracked Grid-Scale BESS deployment.

Investment tax credit (ITC) and accelerated consenting for grid-scale battery energy storage systems. Target ~1 GWh of new capacity over 5 years. capacity over 5 years. BESS provides inertia, fast frequency response, and multi-hour arbitrage that the system needs as renewable share grows. renewable share grows.

DIRECT COST (5Y)	CAPITAL MOBILISED	NEW STORAGE	SYSTEM SERVICES
$85m	**$275m**	**1 GWh**	**FFR + IR**
ITC at ~30%	Private BESS investment	~250 MW × 4h	Inertia replacement

DIRECT GOVERNMENT COST

ITC at ~30% on qualifying BESS capex. 1 GWh at GWh at average $275/kWh installed (2026 avg, avg, falling) = ~$275m investment; ITC = **~$85m ~$85m of foregone revenue over 5 years**.

ITC structure preferred over direct grant: only only fires when capital is actually deployed; tax- tax-payer takes no performance risk. Cost is is accrual-based, recovered partly through company tax on operating profits.

CAPITAL MOBILISED

~$275m of private BESS investment. 3.2× leverage on the ITC. Most projects are commercially viable already; ITC closes the financing gap and accelerates deployment by 18 by 18 to 24 months.

Eligibility threshold: minimum 5 MW / 10 MWh. MWh. Larger projects favoured to maximise maximise system services per dollar of incentive. incentive.

LEGISLATIVE & REGULATORY PATHWAY

Income Tax Act 2007 amendment for the ITC ITC schedule (medium complexity, included in included in standard tax cycle). Companion EA EA work to define BESS participation in reserves reserves and frequency-keeping markets.

FastTrack consenting eligibility — BESS sites sites already qualify under existing settings; settings; targeted RMA national policy statement statement could remove residual local- government friction.

MACROECONOMIC IMPACT

System reliability: 250 MW of fast-response capacity reduces the need for thermal peaking, lowers SAIDI/SAIFI, and provides inertia replacement as Huntly retires.

Wholesale prices: arbitrage smooths peaks and and troughs, narrowing intra-day price spreads by spreads by an estimated 8 to 12%. *Jobs:* 600 to 600 to 900 FTE-years.

02

BATTLE 2 · USEFUL WORK · 4 POLICIES

Move work to electrons. Fleet first.

New Zealand's transport and freight system runs on imported fossil fuel. Fleet electrification is the highest-leverage useful-work target — short routes, predictable duty cycles, central depots. Public infrastructure removes the chicken-and-egg, government leads by example, and autonomous-vehicle readiness future-proofs the network.

06	**Fleet Transport-as-a-Service Incentives**	$120m	$1.2b
07	**Road Automation Programme**	$45m	$45m
08	**EV Charger Network Expansion**	$180m	$540m
09	**Government Fleet Electric Mandate**	$220m	$220m

BATTLE 2 · USEFUL WORK • FLEET ELECTRIFICATION

06 Fleet Transport-as-a-Service Incentives.

Targeted incentives — accelerated depreciation, FBT relief, depot-charging grants — for businesses operating commercial fleets to switch to to switch to electric. TaaS framing recognises that fleet operators buy *kilometres of mobility*, not vehicles. Target: **30,000 commercial EVs over 5 commercial EVs over 5 years**.

DIRECT COST (5Y)	CAPITAL MOBILISED	VEHICLES	FUEL DISPLACED
$120m	**$1.2b**	**30,000**	**~270M L/yr**
Mix of grants, FBT, ITC	Operator + lender capital	Light commercial fleet	Year 5 run-rate

DIRECT GOVERNMENT COST

Three instruments: depot-charging capex grants grants (~$60m), accelerated depreciation for for EV/charger assets (~$40m tax-revenue effect), targeted FBT relief on EV company vehicles (~$20m). **Total ~$120m over 5 years. years.**

All three are well-understood policy levers; precedent in agricultural and R&D tax incentive incentive regimes.

CAPITAL MOBILISED

30,000 commercial EVs at average ~$40k = **$1.2 $1.2 billion of operator capital** mobilised on on $120m of government cost. ~10:1 leverage. leverage.

Significant share is reflagged from existing diesel/petrol fleet capex — operators were going going to buy vehicles anyway. Incentive shifts the shifts the choice, not the spend.

LEGISLATIVE & REGULATORY PATHWAY

Income Tax Act 2007 amendments for accelerated depreciation and FBT schedules. schedules. Standard tax cycle; 12 to 18 months. months. Grant programme administered by EECA by EECA under existing operating mandate. mandate.

No interaction with EA Code or RMA. Smoothest Smoothest legislative path of any Battle 2 policy. policy.

MACROECONOMIC IMPACT

Cost of operating: EVs run at ~$0.05/km on electricity vs ~$0.18/km for diesel. Operators save **$3,000 to $5,000 per vehicle per year** in fuel.

Trade balance: ~270M L/yr of imported diesel diesel displaced ≈ ~$400m/yr improvement in improvement in current account. *Jobs:* 1,500 FTE-1,500 FTE-years.

BATTLE 2 · USEFUL WORK • INFRASTRUCTURE MODERNISATION

07 Road Automation Readiness Programme.

Designate 5 to 8 strategic state-highway corridors as **autonomous-vehicle-ready** : lane markings, signage, digital twin, and connectivity that meets connectivity that meets SAE Level 3+ requirements. Positions NZ for the freight, logistics, and mobility transformation that follows electrification. follows electrification.

DIRECT COST (5Y)	CAPITAL MOBILISED	CORRIDORS	FREIGHT SHARE
$45m	**$45m**	**5–8**	**~40%**
Surveying + retrofits	100% Crown	~1,200 lane-km	Of NZ road freight

DIRECT GOVERNMENT COST

Surveying and digital twin (~$8m), lane marking marking and signage retrofits (~$22m), V2X V2X connectivity infrastructure (~$12m), governance and standards (~$3m). **Total ~$45m ~$45m over 5 years.**
NZTA delivers; aligned with existing state-highway maintenance programmes and incremental rather than greenfield.

CAPITAL MOBILISED

Direct mobilisation is just the $45m of Crown Crown spend. The strategic value is in the **follow-follow-on private capital** that locates AV-readiness here: freight technology, logistics logistics platforms, mobility services.

Precedent: Singapore, the Netherlands, Norway. Norway. NZ's strategic insertion point is the long, the long, sparse state-highway network — well-well-suited to early autonomous freight deployment.

LEGISLATIVE & REGULATORY PATHWAY

Land Transport Act 1998 amendments for autonomous vehicle authorisation and operational design domains. Significant policy policy work; 18 to 24 month consultation.

ACC and insurance liability frameworks need need parallel attention. NZTA-led consultation consultation with industry, Police, and standards standards bodies (ISO 21448).

MACROECONOMIC IMPACT

Productivity: autonomous freight could reduce road-freight costs by 25 to 40%; impact compounds over decades. *Jobs:* 800 to 1,200 FTE-years of construction and ongoing technical jobs.

Strategic positioning: turns NZ from a follower follower into an early-adopter market for autonomous freight technology, attracting investment and IP.

BATTLE 2 · USEFUL WORK • CHARGING INFRASTRUCTURE

08 EV Charger Network Expansion.

Co-funded charging infrastructure roll-out: ultra-fast DC chargers on every state highway corridor (~25–50 km spacing), depot-charging grants for charging grants for fleet operators, and destination charging at high-traffic public sites. Target: **2,000 fast chargers and 8,000 destination chargers**. **destination chargers** .

DIRECT COST (5Y)	CAPITAL MOBILISED	FAST CHARGERS	DESTINATION
$180m	**$540m**	**2,000**	**8,000**
Co-investment grants	3:1 leverage	100+ kW DC	7-22 kW AC

DIRECT GOVERNMENT COST

Fast-charger grants (~$120m at $60k average per average per site, 33% co-funded), destination destination grants (~$40m at $5k average, 50% 50% co-funded), grid-connection co-funding funding (~$20m). **Total ~$180m over 5 years.** Open competitive process. EECA administers; **years.** administers; existing precedent through the Low the Low Emission Transport Fund.

CAPITAL MOBILISED

~$540m of total network investment on $180m $180m of grants; 3:1 leverage. Charge point point operators (Z, BP, Mevo, Tesla, Chargenet) Chargenet) typically co-fund 50 to 67% on a a competitive basis. Geographically targeted: priority on highway highway corridors first (year 1), depot networks networks second (years 2 to 3), destination third third (years 3 to 5).

LEGISLATIVE & REGULATORY PATHWAY

No primary legislation. Grant programme administered under existing EECA mandate. mandate. Distribution-network connection rules rules need *EA Code amendment* for time-bound bound grid-connection commitments.

ComCom oversight on EDB pricing for charger charger connections; alignment with distribution- distribution-pricing reform (Policy 14).

MACROECONOMIC IMPACT

EV adoption: charger availability is the binding constraint for ~40% of prospective EV buyers (MoT survey). Network removes the constraint and unlocks consumer adoption alongside fleet.

Tourism: high-quality charging network is a a known consideration for EV-adopting tourists. tourists. *Jobs:* 1,000 to 1,500 FTE-years.

BATTLE 2 · USEFUL WORK • GOVERNMENT PROCUREMENT

09 Government Fleet Electric Mandate.

All new government fleet vehicles must be electric from 2027, with full transition by 2030. Government, including DHBs, councils, ministries, NZDF councils, ministries, NZDF (admin fleet), Police, NZTA — operates approximately **35,000 vehicles** . Government leads by example and provides example and provides demand certainty.

DIRECT COST (5Y)	CAPITAL MOBILISED	FLEET	FUEL SAVED
$220m	**$220m**	**35,000**	**~95M L/yr**
Net of resale, fuel savings	100% Crown	Vehicles transitioned	By 2030

DIRECT GOVERNMENT COST

EVs cost ~$8k more than equivalent ICE on average (2026, falling). 35,000 × $8k premium = premium = $280m gross, offset by ~$60m of of cumulative fuel and maintenance savings over savings over 5 years. **Net ~$220m.**

By 2030, EVs reach price parity with ICE; the cost the cost premium drops to zero. Long-run cost is cost is negative (savings > capex differential). differential).

CAPITAL MOBILISED

$220m of state capital , fully Crown-funded. The funded. The strategic value is demand certainty: certainty: a 35,000-vehicle committed pipeline pipeline gives importers and dealers confidence confidence to invest in inventory and aftermarket aftermarket support.
Provides a ready secondary market — government EVs cycling out at 4 to 6 years populate the used market with quality vehicles. vehicles. Lifts overall NZ EV penetration.

LEGISLATIVE & REGULATORY PATHWAY

Cabinet directive via the Government Procurement Rules, no primary legislation. MBIE MBIE updates mandatory rules; agencies report report on compliance through standard procurement reporting.

Exemption framework for special-purpose vehicles where EV alternatives don't yet exist exist (NZDF tactical, Police pursuit). Expected Expected exemptions <5% of total fleet.

MACROECONOMIC IMPACT

Operating savings: $25m to $35m/yr of fuel and maintenance savings by year 5; cumulative savings exceed capex premium within 8 to 10 years.

Trade balance: ~95M L/yr of imported fuel displaced ≈ ~$140m/yr of current account improvement. *Jobs:* 400 to 600 FTE-years.

BATTLE 3 · USEFUL HEAT · 2 POLICIES

The block isn't technology. It's capital. capital.

Industrial heat decarbonisation is the hardest of the four demand-side battles. The two-policy response targets the viable cases (dairy, low-temperature industrial) with concessional finance now, and funds the R&D that solves the harder high-temperature residual over the next decade.

10	**Industrial Heat Finance (dairy + low-temp)**	$125m	$700m
11	**NZ-Made High-Temp Heat R&D Programme**	$65m	$120m

10

BATTLE 3 · USEFUL HEAT • CONCESSIONAL FINANCE

Industrial heat finance at government cost of capital.

A revolving concessional loan facility for dairy processors and low-temperature industrial users, replacing gas and coal boilers with industrial heat pumps, electric heat pumps, electric resistive boilers and thermal storage. Loans at OCR + 0.5%, repaid from the operating cost savings the new equipment generates — **cash-flow-positive from day one**.

DIRECT COST (5Y)	CAPITAL MOBILISED	FOSSIL HEAT DISPLACED	OPERATING COST
$125m	**$700m**	**~10TWh**	**–25–55%**
Interest subsidy + admin	$500m loan + co-invest	Dairy + low-temp industrial	Energy bill reduction

DIRECT GOVERNMENT COST

Revolving facility capitalisation: **$500m** (recyclable as loans repay). Interest subsidy vs. vs. commercial rate (~$20m/yr on $500m at 4% at 4% spread): $100m over 5 years. Admin, default reserve, technical assessment: $25m. $25m.
Total direct cost: $125m over 5 years; the $500m $500m principal recycles.

CAPITAL MOBILISED

$500m of direct loan deployment plus **~30% co-~30% co-investment** from participating businesses where project economics warrant. warrant. Total: **~$700m** in project investment investment over 5 years.
Targets dairy processors (7.6 TWh/yr heat demand) and low-temperature food, pulp and and paper, manufacturing. Sub-200°C addressable now via heat pumps (COP ~3).

LEGISLATIVE & REGULATORY PATHWAY

No primary legislation. Crown lending vehicle vehicle housed within EECA or purpose-built built entity (extends EECA's existing industrial industrial heat-pump co-funding). Loan terms terms designed in 6 to 9 months; first loans loans within 12 months.
National guidance to councils on heat-pump pump consenting (refrigerant, noise) standardises standardises deployment.

MACROECONOMIC IMPACT

Cost of living: downward pressure on dairy, processed food, meat, pulp & paper prices through 25–55% energy operating cost reduction at participating firms.

Jobs: 1,500 to 2,500 FTE-years across heat-pump pump install, electrical, refrigeration trades — — concentrated in regional centres. *GDP:* displaces ~1.2 PJ/yr of imported gas with domestic electricity.

BATTLE 3 · USEFUL HEAT • R&D + IP COMMERCIALISATION

11 NZ-made high-temp heat R&D programme.

A 5-year publicly co-funded R&D programme to develop NZ-made solutions for the residual **8.4 TWh of high-temperature fossil heat above 300°C** : **fossil heat above 300°C** : cement kilns, steel arc furnaces, chemical processing, and other hard-to-abate processes outside the current heat-pump current heat-pump envelope.

DIRECT COST (5Y)	CAPITAL MOBILISED	HEAT IN SCOPE	CO-FUND MODEL
$65m	**~$120m**	**8.4 TWh**	**50 / 50**
Grants + programme office	Industry co-fund + follow-on	High-temp residual (>300°C)	Industry-matched grants

DIRECT GOVERNMENT COST

R&D grants: **$10m/yr × 5 = $50m** . Programme Programme office and IP commercialisation commercialisation support: $2m/yr × 5 = $10m. $10m. One-time CRI (Callaghan, GNS) facility facility upgrades: $5m.
Total: $65m over 5 years.

CAPITAL MOBILISED

Industry co-funding (50/50): **$50m** matched matched against grants. Plus follow-on commercialisation capital: estimated **$50–$100m** **$100m** as projects mature toward deployment. deployment.
Total directly mobilised: **~$120m**.

LEGISLATIVE & REGULATORY PATHWAY

No primary legislation. Administered by MBIE / MBIE / Callaghan Innovation in partnership with with CRIs. Annual open calls for proposals; industry partnership a funding condition.

IP arrangements modelled on Endeavour Fund Fund and SFFF. Programme stand-up: 9 months. months. Demo projects operational by end of of year 3.

MACROECONOMIC IMPACT

Cost of living: indirect, future. Cement, steel, petrochemicals get cheaper as high-temp heat costs come down. *Jobs:* 200 to 400 FTE-years, weighted to CRI/university regional centres.

Strategic upside: exportable IP. High-temp industrial decarbonisation is a global multi-multi-trillion-dollar problem.

04

BATTLE 4 · MOLECULE SUPPLY · 1 POLICY

Surplus electrons. High-value domestic use. domestic use.

Once Battles 1, 2 and 3 land, total molecule demand collapses. The strategic move is making sure surplus renewable electricity finds high-value domestic use rather than being curtailed — flexible loads, batteries, and modular compute that exports services rather than electrons.

12	**Flexible-Load User Incentives**	$165m	$500m+

BATTLE 4 · MOLECULE SUPPLY • COMPUTE-AS-EXPORT

12 Flexible-load user incentives.

A package of capacity payments, regulatory recognition and tax provisions to reward electricity users who can ramp up and down with system conditions: EV fleet conditions: EV fleet operators, batteries, batch industry — and most strategically, modular **compute facilities sited next to renewable hubs that export services, not export services, not electrons** .

DIRECT COST (5Y)	CAPITAL MOBILISED	FLEXIBLE LOAD	CAPACITY PAYMENT
$165m	**$500m+**	**400 MW+**	**$50k/MW/yr**
Capacity + tax + admin	Compute + EV + battery	Registered & verified	For verified ramp flexibility

DIRECT GOVERNMENT COST

Capacity payments to verified flex (target 400 400 MW @ $50k/MW/yr): **$20m/yr** . Targeted Targeted tax incentives for compute facilities facilities siting near renewable hubs: **$10m/yr** **$10m/yr** foregone revenue. Admin + verification: verification: $3m/yr.
Total: $165m over 5 years.

CAPITAL MOBILISED

New compute facility investment in renewable-renewable-rich zones (Southland, Manawatū-Manawatū-Whanganui, Northland): **$200m to to $500m** over 5 years. EV fleet charging optimisation: ~$50m. Battery integration: ~$100m.
Total: ~$500m+ , with significant upside if NZ NZ attracts a hyperscale anchor tenant.

LEGISLATIVE & REGULATORY PATHWAY

EA amends the **Electricity Industry Participation Participation Code** to recognise flexible loads as a loads as a dispatchable resource for capacity. capacity. ComCom adjusts EDB Input Methodologies so flexibility-friendly tariffs don't don't lose revenue allowance. Tax via standard standard IRD process.
EA Code work: 12 to 18 months. First capacity capacity payments live within 18 months.

MACROECONOMIC IMPACT

Cost of living: downward pressure on wholesale prices because flexible loads use off-peak energy that would otherwise be curtailed. *Jobs:* 1,000 to 2,000 FTE-years, large upside with hyperscale anchors.

Strategic GDP: by 2030, NZ could host a meaningful share of regional flexible compute compute demand — **export revenue tied directly directly to renewable abundance** .

BATTLE 5 · DELIVERED PRICE · 2 POLICIES

Make extraction visible. Take scarcity off the the profit logic.

The wholesale price went up while every supply-side input fell. Two policies operationalise the fix: make the per-kWh extraction visible and standardise the hedge market (Policy 13), and reform distribution pricing while moving residual thermal capacity off the profit-on-scarcity logic (Policy 14).

13	**Wholesale Market & Price Transparency Reform**	$25m	n / a
14	**Distribution Pricing + Public Thermal Backstop**	~$400m	n / a

BATTLE 5 · DELIVERED PRICE • MARKET REFORM

13 Wholesale market and price transparency reform.

Three coordinated reforms: (1) EA publishes the **per-kWh component breakdown** of every delivered kilowatt-hour each quarter; (2) ComCom + EA stand up a deeper, EA stand up a deeper, standardised forward hedging market; (3) address the windfall margin in abundant hours via CFDs, pay-as-bid for old assets, or a windfall assets, or a windfall capture threshold.

DIRECT COST (5Y)	INFRAMARGINAL RENT	HOUSEHOLD IMPACT	DISCLOSURE LIVE
$25m	**$1.66b/yr**	**$50–200/yr**	**≤ 18 mo**
EA + ComCom resourcing	Hydro 2021-24 (Duane)	Plausible direct savings	Hedge market: 24 mo

DIRECT GOVERNMENT COST

EA + ComCom design, consultation, implementation: **$5m/yr × 5 = $25m** . Disclosure Disclosure system ongoing IT: ~$1m/yr (in EA's EA's existing budget).

Hedge auction platform is **fee-funded by participants** . Windfall capture mechanism, if if implemented, is revenue-positive to the Crown. Crown.

CAPITAL MOBILISED

Not directly applicable — this is a regulatory regulatory reform package. Indirect effect is is significant: a deeper hedge market enables enables independent retailer growth, removing removing the tight oligopoly's pricing leverage. leverage.
With ~$1.66b/yr of inframarginal rent at stake, stake, the redistribution effect dwarfs the implementation cost.

LEGISLATIVE & REGULATORY PATHWAY

Disclosure: Code amendments under **Electricity Electricity Industry Act 2010** . Hedge auction: auction: Code + backstop legislation if voluntary voluntary participation fails. Windfall mechanism: mechanism: primary legislation if via tax.

Disclosure live ≤ 18 months. Hedge reforms reforms operational ≤ 24 months. Windfall mechanism: 24 to 36 months.

MACROECONOMIC IMPACT

Cost of living: downward pressure on retail prices. With $1.66b/yr inframarginal rent at hydro generators, plausible household impact **$50 to $200/yr** .

Jobs: independent retailer growth creates retail-retail-sector jobs. *GDP:* lower industrial prices prices flow through to manufacturing competitiveness in heat-intensive export sectors. sectors.

14

BATTLE 5 · DELIVERED PRICE • STRUCTURAL REFORM

Distribution pricing reform + public resilience thermal backstop.

Two structural reforms bundled. **First:** ComCom Input Methodologies require EDBs to move pricing onto time-of-use and utilisation signals (not fixed daily charges), fixed daily charges), with a Shared Savings Mechanism (Ontario model). **Second:** Crown owns or contracts residual thermal capacity on a cost-recovery basis — no recovery basis — no profit on scarcity.

DIRECT COST (5Y)	EA + COMCOM WORK	DISTRIBUTION REFORM	THERMAL BACKSTOP
~$400m	**$25m**	**Next DPP**	**18–24 mo**
Crown thermal arrangement	IM & Code reform	Reset, ideally 15-yr period	Crown acquisition or contract

DIRECT GOVERNMENT COST

ComCom + EA work on Input Methodology and Methodology and Code reform: **$25m** over 5 over 5 years. Crown procurement of, or long- long-term cost-recovery contract for, residual residual thermal: **$300m to $500m** over 5 years. years.
Total ~$400m mid-point — structure-dependent. dependent. The recent LNG terminal procurement decision sits inside this design design question.

CAPITAL MOBILISED

Distribution pricing reform **opens a much larger larger pool of household behind-the-meter meter investment** otherwise deterred by fixed fixed daily charges.
Public thermal backstop frees up private capital capital otherwise locked into thermal assets — assets — that capital can redeploy into firmed- firmed-renewable plays (Policies 4 and 5).

LEGISLATIVE & REGULATORY PATHWAY

Distribution pricing reform via **ComCom Input Input Methodology amendments** , ideally extended to a 15-year regulatory period. Public Public thermal backstop via Crown acquisition acquisition (Treasury-led) or long-term capacity capacity contracts (procurement-led).
Distribution changes implemented at next DPP DPP reset. Thermal backstop arrangement live live within 18 to 24 months.

MACROECONOMIC IMPACT

Cost of living: directly positive for households investing behind the meter. Lower wholesale prices in dry years if public thermal is operated sub-economically rather than for profit.

GDP: removes the structural drag of rising fixed fixed network charges on electrification decisions; removes the "scarcity is profitable" profitable" incentive at the wholesale-thermal thermal interface.

BATTLE 6 · COORDINATION LAYER · 2 POLICIES

Open protocol, or captured platform.

The next 24 to 36 months decide whether the coordination layer above the meter becomes an open protocol or a platform owned by an incumbent gentailer or offshore hyperscaler. Two policies operationalise the protocol path: publish the open standard, and mandate the open APIs that make the standard real on every connected device.

15	**Open Coordination Standard**	$31m	~$150m
16	**Mandated Open APIs (Connection Condition)**	$25m	~$200m+

BATTLE 6 · COORDINATION LAYER • OPEN STANDARD

15

Open coordination standard with regulatory-period deadline.

EA publishes an open coordination standard covering metering data, DER telemetry (solar, battery, EV, heat pump), flexibility bid format and settlement APIs. settlement APIs. **Standard published within 18 months. Mandatory adoption within 36 months** — inside the current regulatory period so it cannot slip into the next cannot slip into the next reset.

DIRECT COST (5Y)	CAPITAL ENABLED	STANDARD PUBLISHED	MANDATORY ADOPTION
$31m	**~$150m**	**≤ 18 mo**	**36 mo**
EA + reference impl. + consult.	Independent aggregators	After consultation	Hard deadline

DIRECT GOVERNMENT COST

EA standards body resourcing: **$4m/yr × 5 = = $20m** . Reference implementation development + open-source maintenance: $5m $5m one-time + $1m/yr × 4 = $9m. Industry Industry consultation: $2m.
Total: $31m over 5 years.

CAPITAL MOBILISED

~$150m of enabled investment over 5 years: years: independent aggregator platform development, iwi and community aggregator aggregator infrastructure, integration tooling, tooling, migration support.
Reference implementations are open-source so source so smaller participants and community community aggregators can adopt without without proprietary lock-in.

LEGISLATIVE & REGULATORY PATHWAY

Code amendments under **Electricity Industry Act Industry Act 2010** mandate adoption at the 36- the 36-month deadline. ComCom alignment on alignment on connection standards. Privacy Privacy Commissioner involvement on data- data-sharing components.
International references: UK's Common API API Programme, EU's NEM 2.0, IEC and IEEE IEEE standards. Don't reinvent.

MACROECONOMIC IMPACT

Cost of living: households capture revenue from their own solar and battery assets, rather than the value flowing to a platform owner. *Jobs:* moderate but high-value — software, integration, standards.

GDP: enables a new independent aggregator aggregator industry; protects NZ from value value extraction by offshore platform incumbents incumbents who would otherwise capture the the layer by default.

BATTLE 6 · COORDINATION LAYER • API MANDATE + M&A SCRUTINY

16

Mandated open APIs as condition of connection.

Hardware vendors selling smart meters, inverters, batteries, EV chargers, hot-water controllers and heat pumps into NZ must expose **open APIs (compliant with the (compliant with the Policy 15 standard) as a condition of connection** . Bundled: ComCom scrutiny on aggregator platform M&A by gentailers or hyperscalers. or hyperscalers.

DIRECT COST (5Y)	CAPITAL ENABLED	NEW INSTALLS	GRANDFATHERING
$25m	**$200m+**	**≤ 18 mo**	**3–5 yr**
Certification + ComCom + transition	Indep. aggregators & integrators	API mandate live	Existing hardware transition

DIRECT GOVERNMENT COST

Certification body (largely fee-funded by vendor vendor certifications, Crown backstop in early early years): **$3m/yr × 5 = $15m** . ComCom for ComCom for aggregator-acquisition scrutiny: scrutiny: $1m/yr × 5 = $5m. Industry transition transition support: $5m one-time.
Total: $25m over 5 years.

CAPITAL MOBILISED

~$200m+ of enabled investment : independent independent aggregator capital (which won't won't deploy without interconnect confidence), confidence), community and iwi aggregator aggregator capitalisation, NZ-domiciled software software and integration startups.
Significant upside if the NZ standard becomes a becomes a regional reference point.

LEGISLATIVE & REGULATORY PATHWAY

Connection standards via **EA Code under Electricity Industry Act 2010** . ComCom merger merger control jurisdiction (**Commerce Act 1986 Act 1986**) extended or clarified to cover aggregation platform M&A via ministerial direction or amendment.

Certification body operational ≤ 12 months. API months. API mandate live for new installs ≤ 18 ≤ 18 months. Grandfathering transition complete complete by month 60.

MACROECONOMIC IMPACT

Cost of living: indirectly positive — preserved competitive pressure keeps aggregator service fees thin. *Jobs:* moderate, software / integration weighted, with regional uplift via community / iwi aggregators.

GDP: strategic value is the prevention of a platform-capture outcome where household-household-hardware value flows offshore.

CROSS-CUTTING REFORMS · 2 POLICIES

Reach the households finance can't. Measure Measure what matters.

Two reforms cut across all six battles. **Policy 17** closes the equity gap that Battle 1's financing instruments cannot reach: social housing tenants, low-income owner-occupiers, renters in the split- incentive trap. **Policy 18** retires ICP counts and tells the regulator to count megawatt-hours, megawatts of flexibility, and share of distributed generation instead.

17	**Equity Package (Targeted Support + Renters)**	$295m	~$500m
18	**Regulatory Measurement Reform (ICP → MWh / MW)**	$15m	n / a

17

CROSS-CUTTING • EQUITY + RENTERS

Equity package — targeted support and renters.

Three sub-elements.**Targeted subsidies** (not loans) for social housing and low-income owner-occupiers who can't service debt. **Landlord tax incentives**+ rental WoF **incentives**+ rental WoF energy standards.**On-bill finance** for rentals — the cost recovers through the property's electricity bill, transferring cleanly between tenancies cleanly between tenancies and dissolving the split-incentive problem.

DIRECT COST (5Y)	CAPITAL MOBILISED	HOUSEHOLDS REACHED	AVG. HOUSEHOLD SAVING
$295m	**~$500m**	**~45,000**	**$1.5–2.5k/yr**
Subsidies + tax + on-bill	Incl. rental sector unlocks	Beyond Battle 1 instruments	Targeted subsidy households

DIRECT GOVERNMENT COST

Targeted subsidies for ~25,000 households (15k households (15k social housing + 10k low-income income owner-occupier) at avg $10k each = = **$250m** . Landlord tax incentive (foregone (foregone revenue): $30m. On-bill finance subsidy + capitalisation: $10m on a $100m revolving base. Admin + WoF standards: $5m. $5m. **Total: $295m** over 5 years.

CAPITAL MOBILISED

Targeted-subsidy households can't co-invest, so invest, so $250m of public spend stands largely largely on its own. The **on-bill mechanism unlocks ~$200–250m of private rental-sector sector investment** otherwise deferred indefinitely. Total directly mobilised: **~$500m** over 5 years. years.

LEGISLATIVE & REGULATORY PATHWAY

Subsidies via budget appropriation (EECA + + Kāinga Ora). Landlord tax via standard IRD IRD provisions, next budget cycle. On-bill: **Code Code amendments under EI Act 2010** . Rental Rental WoF via Residential Tenancies Act (extends Healthy Homes Standards).

First subsidies live within 12 months. Rental WoF: Rental WoF: 18 to 24 months, phased.

MACROECONOMIC IMPACT

Cost of living: directly positive for ~45,000 households. Subsidy households see immediate $1.5–2.5k/yr bill cuts. Renter households see lower bills net of on-bill finance from day one.

Strategic: prevents the cross-subsidy death spiral spiral where remaining grid-dependent (low- (low-income, renter) households bear rising fixed rising fixed network charges supporting an "energy elite."

CROSS-CUTTING • REGULATORY KPIS

18

Regulatory measurement reform — ICP to MWh / MW.

A direction to EA and ComCom to **retire ICP counts as the primary metric of retail competition** , and replace them with metrics that measure what actually happens: what actually happens: share of MWh traded by independent retailers, share of MW of peak capacity from demand response and storage, share of distributed of distributed generation. Upstream of every other policy here.

DIRECT COST (5Y)	NEW METRICS	METRICS LIVE	ICP RETIRED
$15m	**3 axes**	**≤ 18 mo**	**≤ 24 mo**
EA + ComCom resourcing	MWh share · MW flex · DG share	Published quarterly	Or relegated to supporting

DIRECT GOVERNMENT COST

EA work redefining competition metrics under under the EI Act 2010 framework: **$2m/yr × 5 = × 5 = $10m** . ComCom alignment on EDB price-price-quality regulation metrics: $1m/yr × 5 = 5 = $5m. **Total: $15m** over 5 years — the cheapest policy policy in the package.

CAPITAL MOBILISED

Not directly applicable — regulatory direction-direction-setting. **Indirect effect is large:** by by making distributed generation and flexibility flexibility visible as competitive activity, it strengthens the case for private capital deployment in Battles 1, 2, 4 and 6.

LEGISLATIVE & REGULATORY PATHWAY

Ministerial direction to EA and ComCom, with supporting Code amendments under EI Act 2010 and Input Methodology amendments under **Commerce Act 1986**.

Programme design + consultation: 9 months. months. New metrics published quarterly within within 18 months. ICP relegated within 24 months.

MACROECONOMIC IMPACT

Cost of living: indirect. Over 3 to 5 years, the visibility shift biases regulatory action toward distributed generation, demand response, independent retail and flexibility — all of which lower delivered prices.

Strategic GDP: aligning the regulator's success metric with the transition itself removes the structural friction that keeps the existing system overweighted in regulatory attention.

Consolidated 18-policy summary.

$2.0 billion of direct government cost over 5 years mobilises $9.7 billion of total investment. **Every $1 of Every $1 of government spend mobilises $4.84 of capital.**

#	BATTLE	POLICY	DIRECT COST (5Y)	CAPITAL MOBILISED	KEY SYSTEM BENEFIT
01	B1	**Residential Solar Lending Facility**	cost-neutral	$2,880m	1.4 GW rooftop; $1,762/yr household saving saving
02	B1	**Residential Batteries for VPP**	$135m	$575m	250 MW peak shaving; 600 MWh storage storage
03	B1	**Public-Sector VPP Batteries**	$130m	$130m	250 MWh across schools, hospitals, marae marae
04	B1	**Government PPAs (firmed)**	cost-neutral	$1,700m	~1,900 GWh/yr new firmed renewable supply supply
05	B1	**Fast-tracked Grid-Scale BESS**	$85m	$275m	500 MWh grid-scale storage; price stabilisation stabilisation
06	B2	**Fleet operator TaaS incentives**	$150m	$1,400m	20,000 fleet EVs; ~190M L/yr petrol displaced displaced
07	B2	**Fast-track road automation programme**	$80m	$50m	NZ ready for AV operation by 2028–29
08	B2	**National EV + fast-charger network**	$130m	$300m	500 fast-charger sites; first-customer fix
09	B2	**Government fleet electric + autonomy-capable capable**	$150m net	$225m	15,000 govt vehicles; demonstration anchor anchor
10	B3	**Industrial heat finance (dairy + low-temp)**	$125m	$700m	~10 TWh fossil heat displaced
11	B3	**NZ-made high-temp heat R&D**	$65m	$120m	Solutions for residual 8.4 TWh of high-temp heat heat
12	B4	**Flexible-load user incentives**	$165m	$500m	400 MW+ flexible load; compute-as-export export
13	B5	**Wholesale market & price transparency reform reform**	$25m	n/a	Per-kWh visibility; deeper hedge market
14	B5	**Distribution pricing + public thermal backstop backstop**	$400m	n/a	EDB pricing rewards flex; thermal off scarcity scarcity
15	B6	**Open coordination standard**	$31m	$150m	Architecture for metering, DER, flex bids
16	B6	**Mandated open APIs as connection condition condition**	$25m	$200m	No vendor lock-in; ComCom M&A scrutiny scrutiny
17	X-CUT	**Equity package (targeted support + renters) renters)**	$295m	$500m	~45,000 equity-targeted households reached reached
18	X-CUT	**Regulatory measurement reform (ICP → MWh/MW) MWh/MW)**	$15m	n/a	EA/ComCom shift KPIs to real market share share
		Totals	**$2,006m**	**$9,705m**	**Capital multiplier: 4.84×**

Read this as a portfolio, not a menu. Five of the eighteen policies (1, 4, 13, 14, 18) are cost-neutral or near-zero-direct-spend reforms doing the heavy structural lifting. The financing instruments (1, 2, 10, 17) move private and household capital that fiscal spend cannot reach. The market & coordination reforms (13, 14, 15, 16, 18) are the cheapest and the most leveraged.

Eight risks. Each manageable. None zero. zero.

The right response to all eight is the same: **publish the targets, publish the data, run independent independent annual evaluation against the headline numbers** in the consolidated table. table.

Risk 01

Uptake and participation

10% solar in 2 years, 50,000 batteries in 5, 20,000 fleet EVs in 5 — all all depend on consumer confidence, outreach, and bottlenecks resolved. resolved. Slower uptake delays projected benefits.

Risk 02

Grid & technical integration

Rapid DER growth can outpace the grid's ability to absorb decentralised decentralised generation. EDBs need additional investment and regulatory regulatory flexibility to prevent local congestion and connection delays. delays.

Risk 03

Industrial transition (Battle 3)

Dairy and food processors may resist if global commodity prices weaken. Mid-temp Mid-temp heat-pump tech is still emerging at scale. R&D programme carries normal normal commercialisation risk.

Risk 04

Transport & AV readiness (Battle 2)

AV deployment faces public safety and trust challenges. First-customer fix may face EDB may face EDB pushback over revenue allocation. Fleet incentives may attract gaming if gaming if eligibility is loose.

Risk 05

Economic & financial uncertainty

Interest rates, equipment costs, retail tariffs may shift. The 15%/yr battery 15%/yr battery deflation is conservative against global trends but assumes but assumes supply-chain stability. Slower private capital flows can slip can slip timetables.

Risk 06

Market & regulatory dynamics (Battle 5)

Incumbent gentailers and EDBs will resist wholesale and distribution- distribution-pricing reform. Hedge reform needs voluntary participation participation by the firms most disadvantaged, or backstop legislation. legislation.

Risk 07

Coordination capture (Battle 6)

The 24 to 36 month window is tight. If the standard is captured during during development by gentailers or hyperscalers, the policy outcome outcome reverses. UK and EU precedents show this is structurally hard. structurally hard.

Risk 08

Distributional risk

Accelerated DER shifts costs onto non-participants if network upgrades upgrades aren't carefully managed. Policies 17 and 18 directly mitigate, mitigate, but they have to land at the same pace as Battle 1 financing. financing.