The Aotea Energy Master Thesis: Electrifying New Zealand

Introduction

New Zealand has committed to a bold future: a fully electrified and resilient economy powered by renewable energy. But achieving this requires more than just generation: it requires *flexibility, storage, and intelligence* at the edge of the grid.

At AE, we believe the home battery is the cornerstone of this future. Our mission is to build the most affordable and intelligent battery system in New Zealand, empowering households to reduce power bills, unlock flexibility, and accelerate the nation's energy transition.

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The Challenge

- **Renewables are abundant, but volatile**: Hydro, wind, and solar supply fluctuate daily and seasonally.
- **The grid is under pressure**: Peaks in demand drive costs, requiring expensive infrastructure upgrades.
- **Households and industry bear the cost**: Rising electricity prices and network charges impact New Zealanders and our business community directly.

The missing piece is storage that works *behind the meter* and connects seamlessly to retail markets.

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Our Solution: The Aotea Mark1 Smart Battery

- **Affordable + Long Lifecycle**: Priced to deliver a return on investment within 6 years. Our AE Smart Battery is at the bleeding edge of where the technology is, with a 24 year lifetime guaranteed at 1 cycle per day.
- **Smart**: Integrated with the AE App and our retail programme, enabling households to shift consumption automatically.

- **Independent**: No solar required to shift your energy, though adding solar only accelerates the returns and local independence. Our battery imports electricity when prices are lowest and discharges when prices are high, cutting bills by at least $1,000 per year.

- **Scalable**: As more batteries are deployed, the collective impact reshapes the grid – reducing peak load, flattening demand, and enabling more renewable penetration.

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The Model of Self-Arbitrage

Today, most households are passive consumers. Tomorrow, every Aotea home will be an active market participant.

- **Import when cheap**: Charge at night or during low-price windows.

- **Discharge when costly**: Power the home during evening peaks.

- **Automated trading**: Our app handles it all, so households save without changing habits.

This model halves electricity bills for many families – or delivers guaranteed savings of at least $1,000 per year.

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The National Impact

If 250,000 homes adopted Aotea batteries:

- **Grid savings**: Billions avoided in new transmission and distribution upgrades.

- **Decarbonisation**: More renewable generation absorbed without curtailment.

- **Resilience**: Homes maintain power security during outages.

- **Equity**: Affordable access to electrification, not limited to solar-rich households.

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A Vision for Electrification

Our thesis is simple:

1. **Storage first**: Affordable batteries are the fastest lever for electrification.

2. **Software second**: Intelligence drives savings and grid value.

3. **Retail integration**: By being a retailer, we ensure households access wholesale markets, not retail markups.

4. **Electrify everything**: From transport to heating, storage unlocks the potential of renewables across the economy.

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The Next Steps

- **Launch the Aotea Battery**: 15 kWh, bundled with our app and retail programme.

- **Deploy at scale**: Target hundreds of installs in our first year, growing exponentially thereafter.

- **Build in New Zealand**: A local battery factory to support jobs, resilience, and national sovereignty.

- **Network effects**: As households adopt, collective intelligence and trading scale amplify benefits.

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Conclusion

New Zealand can lead the world in electrification – not just by generating clean power, but by storing and shifting it intelligently. The Aotea Mark1 Smart Battery, with a 6-year ROI and proven bill savings, is the foundation of this future.

This is the Aotea Master Thesis: Storage for every home, electrification for every New Zealander.