DEMYSTIFYING ELECTRIFICATION

A guide to the What, Why and
How to electrify your business

Wānaka | Queenstown
NEW ZEALAND

WHY SHOULD BUSINESSES ELECTRIFY?

Electrifying your business is one of the most impactful ways to reduce emissions, cut long-term costs, future-proof operations, and meet customer and regulatory expectations. With Queenstown Lakes District targeting a carbon zero visitor economy by 2030 and over 80% of New Zealand's electricity already coming from renewables, switching from fossil fuels to electric systems means you can run your business on cleaner, cheaper, and smarter energy.

WHAT IS ELECTRIFICATION?

Electrification means transitioning systems and processes (machines) that currently rely on fossil fuels - like diesel, petrol, LPG, or coal - to run instead on electricity. This includes transport, heating, cooking, and industrial processes. The goal is to reduce carbon emissions and use clean, renewable energy to power your business. Electrification is also often 2-4 times as efficient thermodynamically as using fossil fuels for the same task, meaning you get energy and cost savings.

THE BENEFITS

ECONOMIC & COMMERCIAL

Electrification can offer:

Lower Operating Costs: Electrification is generally cheaper than diesel or LPG because of the increased thermodynamic efficiency of electric machines (e.g. heat pumps 3-4 times as efficient as gas, electric vehicles 3-4 times as efficient as petrol/diesel).

Operational Efficiency & Safety: Induction cooking is faster and safer; electric vehicles have fewer moving parts and break down less often.

Customer & Staff Attraction: Demonstrating climate action can appeal to values-driven visitors and employees.

Future-Proofing: Prepares you for upcoming carbon regulations, energy price volatility, and ESG expectations from suppliers and investors.

Better Performance: Electric appliances often outperform fossil fuel versions, and the quieter, fume-free operations improve staff wellbeing.

Brand & Marketing Edge: Credible sustainability stories create competitive advantage.

ENVIRONMENTAL & SOCIAL

Lower Emissions: Switching to electricity significantly cuts Scope 1 and 2 emissions.

Cleaner Air: Reduced combustion improves air quality and health outcomes.

Community Resilience: Less reliance on imported fuels strengthens local energy sovereignty.

Climate Leadership: Aligns with the Destination Management Plan and local environmental values.

IN WHAT WAYS COULD A BUSINESS ELECTRIFY?

Electrification isn't just about electric vehicles (EVs) - it's relevant across every tourism business.

ACCOMMODATION

- Switch to electric hot water heat pumps
- Install induction cooktops in kitchens
- Electrify heating and cooling systems
- EV charging for guests
- Switch to LED lighting
- Install rooftop solar to lower bills
- Install a battery to increase resilience

TRANSPORT & ACTIVITY OPERATORS

- Transition shuttle vans or buses to EVs
- E-bikes or e-boat fleets
- Electrify ski field snow groomers and greenkeeping machinery

FOOD & BEVERAGE

- Move from gas to induction cooktops
- Electrify ovens, and hot water
- Improve ventilation and reduce kitchen heat
- Switch to LED lighting

RETAIL

- Replace diesel generators with battery back-up systems
- Switch to LED lighting
- Heat pumps for comfort and efficiency

EVENTS & CONFERENCES

- Electric AV and lighting systems
- Collaborate with venues to electrify event logistics
- Using portable battery systems
- Electric transport options for attendees

PRACTICAL CONSIDERATIONS

FINANCIAL SUPPORT

Green Loans: Most banks offer preferential rates for sustainable upgrades.

Tax Incentives: Depreciation benefits on clean tech.

COMMUNITY & INDUSTRY SUPPORT

Join Queenstown Electrification Accelerator Programme workshops to connect with experts on electrification and share learnings.

Collaborate with neighboring businesses to share infrastructure (e.g. solar arrays, EV chargers).

GRID CONSTRAINTS & ENERGY RESILIENCE

Yes, the local grid is constrained. That's why businesses can lead by installing:

- Solar panels and battery systems for resilience
- Load management systems to avoid peak hour use
- Off-grid or microgrid thinking for remote locations

WHAT SHOULD I PRIORITISE?

Start with your highest-emission, most used, or most inefficient systems:

- Transport fleets
- Hot water and space heating
- Cooking equipment
- Appliances with long duty cycles (laundry machines)

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IS MY BUSINESS SUITABLE?

ARE ELECTRIC VEHICLES VIABLE?

Yes, but assess range and charging access. Consider:

- Overnight charging on-site
- Using EVs for set routes or last-mile shuttles
- Government support for public chargers

ENVIRONMENTAL IMPACTS OF ELECTRIC TECHNOLOGY

Yes, EVs and batteries have an environmental footprint, especially in mining. But lifecycle studies consistently show up to 60–80% fewer emissions over their lifespan than fossil fuel equivalents:

- Emissions from production are outweighed by savings within 1–2 years of operation.
- Recycling of EV batteries and solar panels is improving rapidly (NZ Battery Industry Group and Circular Connect initiatives).

Source: Rewiring Aotearoa

DO I NEED BUILDING UPGRADES?

- Upgrading your switchboard may be needed.
- Consider heat pump water systems, solar-ready roofing, and EV charger prewiring.
- Retrofit programmes may offer support or assessments.

WHAT IF I DON'T OWN MY OWN BUILDING?

- Work with landlords to show return-on-investment benefits.
- Co-invest in shared infrastructure like EV chargers or solar arrays.
- Lease agreements can include "green clauses."

OPERATION DISRUPTIONS & CONTINUOUS IMPROVEMENT

- Some retrofits require downtime - schedule during off-peak seasons.
- Start small, test equipment, scale up.
- Monitor new tech releases, attend workshops, and upgrade when it makes sense.

MEASURING THE IMPACT

Track energy use pre- and post-electrification through energy bills or smart meters.

Use tools like **Cogo** (fully subsidised for RTO members) to measure emissions savings. More information linked here.

Metrics to track:

- Total kWh used from electricity vs fossil fuel
- Emissions per visitor/staff/room night
- Cost per unit of service delivered

LOOKING TO THE FUTURE

Electrification has evolved beyond just switching to electric vehicles or appliances — it's about building smarter, more flexible energy systems that reduce pressure on the grid.

- **Smart Charging** means your EV can charge when electricity is cheapest.
- **Vehicle to Grid (V2G)** turns your EV into a power bank on wheels. It sends power from the battery to the grid when it's not needed.
- **Community energy schemes** may soon enable neighbours to share solar networks and energy across homes, schools, and businesses, improving affordability and reliability.

NEXT STEPS

If you'd like to electrify your business but don't know where to start, the Queenstown Electrification Accelerator (QEA) team is here to help.

The QEA helps homes and businesses save money and emissions through electrification. It's a locally-led collective of projects, partnerships, and community resources dedicated to tackling our region's energy challenges head-on.

ENERGY EDUCATION & SUPPORT

Free guides, community workshops, and one-on-one energy consultations to help homes and businesses lower their energy bills and emissions.

RESEARCH & ANALYSIS

Independent and transparent energy modelling to help make options clear.

GROUP DISCOUNTS & EARLY ACCESS TECH

Bulk buy deals for heat pumps, solar systems, and EVs; partnerships with technology companies for vehicle-to-grid and community batteries.

AFFORDABLE FINANCE OPTIONS

Accessible loans for purchasing electric machines that save money from day one for homes and businesses.

Visit the QEA Website

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