

Energy and Carbon Case Studies

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See how evidence becomes a project decision

These case studies show how organisations have investigated energy use, assessed opportunities and planned improvements. They provide useful examples of project scope and decision-making, but outcomes from one site should not be treated as a forecast or guarantee for another.

Read estimates and achieved results carefully

Check whether a figure is an audit estimate, an approved business case, an implemented measure or a verified result. Note the measurement boundary, reporting period, operating conditions and whether grants or certificates were included. These details determine what can reasonably be transferred to a new project.

Featured case studies

Nomad Coffee: using an energy audit to prioritise improvements

Victorian water corporation: turning energy targets into a programme

Browse Case Studies

5G Networks optimise the country with Energy Upgrades

Airline Parts Manufacturer Lands Great Opportunities

AJ Bush & Sons: 10MW Boiler Upgrade Funded by Energy Savings Certificates

Aurora Place: HVAC overhaul funded by Energy Savings Certificates

Bio-Tech Company Injects Life Into Their Energy Efficiency

Borg Manufacturing modernise plant through energy savings

Charter Hall office building aglow with lighting upgrade

Bulla Dairy Food's boost efficiency and reduces waste.

DON Smallgoods large energy payoff

DON Smallgoods Develops Energy and Carbon Strategy

Energy Audit Takes Nomad Coffee To Next Level

Energy Savings Formula

Frew Foods: 10,183 VEECs from a biomass boiler upgrade chops energy costs

Geelong Grammar School: \$74,000 Solar rebate from 1,330 VEECs

Global Financial Institute Commits to Achieving Net Zero by 2050

Greenham: Moving Towards Decarbonisation

Helping Methodist Ladies' College Maximise Energy Savings with VEECs

Kalafatis Fresh Produce: \$283K in Solar Certificates

Kimberly-Clark cleans up with energy savings

MainStream Aquaculture: \$19K Grant funds a heat pump electrification project

Melbourne Cricket Ground: The New Shining Light

Metcash: Lighting upgrade certificates across the distribution network

Metro Trains on track to energy efficiency

Molycop Strives for Greater Sustainability

MolyCop swirls into Energy Savings

Pharma Company Insures A Healthy Level Of Energy Efficiency Performance In New Facility

Poultry Client Set to Hit 2030 & 2050 Carbon Emissions Targets

Telfords Goes Solar – A PBA Success Story

Turning a Regional Utility into an Active Energy Market Participant

Biomass boiler heats greenhouses through the VEU program: Van Wyk Flowers

Victorian Water Corporation

Visy Gibson Island: 34,000 t CO₂e Cut a Year With Waste-to-Energy

William Inglis reduced its energy consumption by 30% and received a financial return

Yallambee Traralgon: Aged Care Village Reduces Energy Costs and Carbon Footprint with 276-kW Solar VEEC Project

What staged approach did Greenham use across its multiple sites for industrial decarbonisation?

Greenham implemented a multi-site decarbonisation programme across Tasmania and Victoria. This included a coal-to-biomass conversion at Smithton, Tasmania; solar feasibility assessment and energy audit at Tongala, Victoria; and investigation of cogeneration using natural gas and biogas. We provided support across different sites and technologies, assisting with environmental certificates and funding to help each location progress toward decarbonisation within our specific operating requirements.

What measurement challenges did Kalafatis Fresh Produce face with its solar installation?

Kalafatis Fresh Produce installed a 400 kW solar system but encountered significant baseline complications. Site expansion and inverter-data issues made it difficult to accurately assess project performance. The expansion increased production loads while solar reduced grid purchases, and comparing electricity totals without accounting for these operating changes obscured the true energy impact. This experience highlights why documenting planned site changes before installation and establishing reliable meter records are essential for meaningful performance verification.

How did Nomad Coffee use an energy audit to prioritise its improvement opportunities?

Nomad Coffee undertook a Type 2 energy audit at its Richmond roastery that examined energy-use patterns, tariffs, short-term metering, and energy consumption per unit of production. The audit identified multiple improvement opportunities and created a prioritised register. This systematic approach allowed the business to understand which equipment and processes offered the greatest efficiency gains, supporting management in deciding which opportunities to pursue and in what

sequence.

What evidence did MainStream Aquaculture need to evaluate its heat pump feasibility?

MainStream Aquaculture's heat pump feasibility assessment required defining the exact heat requirements—specific temperatures, flow rates and operating hours—alongside identifying available waste-heat sources. The assessment evaluated whether the proposed heat source would be available when heat was needed, determined appropriate redundancy and control strategies to protect operations, and considered whether thermal storage could help. These elements were essential to developing a reliable system design that could deliver required conditions while reducing gas reliance.

Why is documenting project chronology critical before pursuing environmental certificate pathways?

Project timing determines eligibility under most certificate schemes. Recording exact dates for investigation, investment decisions, purchase commitments, installation, commissioning and operation establishment allows advisers to assess whether prerequisites are met and whether the intended pathway remains available. An investment commitment or asset purchase before scheme application may affect eligibility under some programmes. We recommend establishing chronology early, distinguishing estimates from measured data, and clarifying prior incentives or ownership arrangements before proceeding with nomination or evidence gathering.

What should a business prepare before undertaking a similar water or multi-site energy project?

Businesses should prepare a site-by-site table documenting major thermal loads, fuels, annual consumption, operating hours, known replacement dates and existing studies. For water utilities and large multi-site operations, compile a site and asset register, bills and interval data, operating records, available monitoring data, constraints, and current energy contracts. Identify one immediate decision for each site to allow an adviser to scope assessment without assuming historical project designs should be repeated elsewhere.

How should investment cases present financial benefits from energy projects?

Investment cases must keep benefit lines separate and distinct. Energy reduction, tariff effects, maintenance benefits and certificate proceeds each need their own calculation basis, units and timing. Avoided grid electricity and financial savings are different results requiring separate documentation. Do not add overlapping estimates or assume conditional support will materialise. A transparent early-stage case showing operating requirements, assumptions and unresolved dependencies is more useful than a precise-looking return built from unverified inputs. Present projects with and without conditional contributions.

When comparing energy-efficiency options across multiple locations, how should boundaries be established?

A multi-site assessment should prepare separate diagrams or descriptions for the process boundary, metering boundary and possible scheme boundary. Record utilities shared between production areas and document if multiple projects will occur together, agreeing how effects will be distinguished. Each site needs its own operating requirements, available energy sources, project boundary and business case. A site changing throughput or adding process capacity needs those changes represented in assessment so production changes do not obscure performance improvements or vice versa.