



Sustainable **Action** for a Better Tomorrow

Project Delivery • Carbon Experts • Sustainability • Strategy



The World Needs Superheroes

Embracing climate positive action is a strategic imperative for businesses today. There is an urgent call for businesses to create frameworks that align their decision-making processes with practices that focus on saving energy, reducing carbon emissions & driving sustainable growth. In essence the world needs **Business Superheroes**.

We are **DETA**. Our tailored approach backed by cutting-edge technology & industry insights, helps us deliver practical & realistic improvement projects for businesses that will leave a positive imprint for generations to come.

Our people are passionate about one thing – taking action for a better tomorrow. We want our work to positively shape the future. We work behind the mask to create sustainable industrial & commercial impact. That is where we see our superpower – we believe in the potential of our clients to become superheroes as well, we are privileged to work with organisations finding new ways to create positive actions that pursue decarbonisation, operational cost reduction, energy efficiency & management, & sustainability goals.

We work with our clients across all industry sectors to power the transformation needed to reach net-zero by 2050. We do this by harnessing our talent, our innovative thinking, technology, & partnering with our clients to understand their business.



Our Mission
Remove
2 million
tCO₂
emissions
EVERY YEAR
BY **2030**

Working Together for Long-Term Impact on the Environment

We have successfully delivered multimillion-dollar energy and process efficiency, carbon reduction, & sustainability projects for some of Australasia's most iconic businesses.

DETA provides complete carbon & energy management advice & services to help businesses across Australasia & the Pacific control energy use & reduce carbon footprints. We can assist from business case development & project development, through to full project delivery for a turnkey solution.

We empower our clients to make smart energy & sustainable business decisions. Many of our clients have achieved significant carbon emission reductions, energy savings, & water efficiency improvements. But that is just the beginning of what needs to be done. Our goal is to partner with you to understand your business & give you tools to navigate the long term sustainability & business resilience pathway that is ahead. Helping our clients achieve meaningful cost reduction, & build a sustainability capability, is what we do best.

Our Capabilities

- ▶ Carbon Strategies & Decarbonisation Roadmapping
- ▶ Energy Efficiency & Process
- ▶ Energy Auditing
- ▶ Water & Wastewater Reduction
- ▶ Transport
- ▶ Strategy & Advisory
- ▶ Process Optimisation
- ▶ Project Delivery

Real World Results

Our work focuses on giving clients measurable benefits in decarbonisation & sustainability processes, operational improvements, & **energy resource efficiency**. We are always looking for ways to **future-proof** our clients with resources that will enable their businesses to continue progressing their sustainability journey. We pride ourselves on delivering tangible outcomes that go way beyond theoretical reports. Achieving long lasting action on climate change and sustainability can't be done in isolation – hence we strive for a **collaborative approach**. Our DETA teams of technical engineers, project managers, & strategic sustainability advisors all understand that sustainability & carbon reduction initiatives require action, & that's why we work hand in hand with our clients to develop **practical solutions**. Through collaborative partnerships we leverage our engineering expertise & our specialist knowledge of carbon & energy to help our clients make a real impact on the environment & their bottom line. From **optimising energy efficiency** to **reducing carbon emissions**, our track record of delivering measurable results sets us apart as a trusted partner in creating a greener, more sustainable future.

Why We Do It

At DETA we are driven by a powerful purpose: **sustainable action for a better tomorrow**. Our unwavering commitment to this purpose is reflected in our strategic goal to actively remove 2 million tonnes of CO2 emissions from the atmosphere every year by 2030. This target fuels our passion & inspires our everyday work. By empowering our clients to take action on sustainability, carbon & energy - we are harnessing the power of collaboration to actively contribute to a sustainable future for our planet & generations to come.

Client Story

ANZCO Foods

NZL



ANZCO Foods are a NZL based meat processing company focusing on delivering outstanding Beef & Lamb products for consumers from product to plate.

Working collaboratively, DETA has partnered with ANZCO Foods for more than a decade to support the company in its mission to become the world's most environmentally responsible red meat producer.

We understand that sustainability & carbon reduction initiatives require action, & that's why we work hand in hand with our clients to develop practical solutions. For ANZCO Foods, the results of this partnership speak for themselves – the initiatives & projects we have implemented have delivered consistent energy, carbon, & efficiency savings thanks to ongoing investment, & a coordinated sustainability focus from the ANZCO energy management team.

Our work together has reduced ANZCO's energy costs across their group & achieved carbon emission reduction savings.

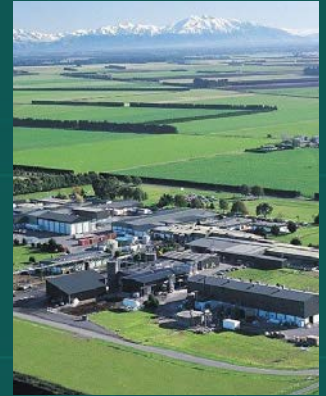
Over our working relationship the scope & range of projects we have implemented, is a prime example of our commitment to

go beyond the theoretical for our clients & deliver tangible, real outcomes. Some of the specific projects we have delivered include;

- ▶ Project Delivery of major projects including lighting & refrigeration upgrades, process improvement & rendering upgrades, High Temperature Heat Pumps (HTHP), installation, processing expansion, & robotic automation projects.
- ▶ Decarbonisation Pathway & Implementation Planning
- ▶ Feasibility & Business Case development for a range of projects including decarbonisation (HTHP, biogas, efficiency), expansion (both beef & lamb process expansion), water management
- ▶ Ongoing applications & business cases for government funding applications
- ▶ A complete ETA (Energy Transition Accelerator) of ANZCO operations across nine sites

Automation Upgrades

DETA was the project delivery partner for ANZCO on a \$13M robotic upgrade project. DETA worked with ANZCO's internal team to develop a scope, appoint contractors, & provide schedule & cost management to the project. DETA also had a site presence, including acting as shutdown manager during integration of the new plant, taking a critical coordination role.



GIDI HTHP

DETA was engaged to identify how HTHPs (High Temperature Heat Pumps) could be integrated into a brownfield site with minimal impact on production. DETA connected ANZCO with the EECA GIDI Fund (Government Investment in Decarbonising Industry). The project was approved. DETA provided overall project management support to facilitate contractor support, mechanical installation of major plant, electrical upgrade, & civil design & construction. This project became the first GIDI project to be commissioned in New Zealand.



Mechanical Design & Project Management

DETA was commissioned to provide the mechanical design & project manage a \$3.5M hot water upgrade. Key aspects of the work undertaken included concept design, specifications, & drawings (tank sizing, pipework design, heat exchanger & ventilation integration), risk analysis & health & safety management, coordination of contractors, equipment selection & specification, procurement management, supervision of installation, commissioning, & post-implementation review.



Carbon Strategies & Decarbonisation Roadmapping

Taking action on carbon is becoming a key focus for businesses across all sectors. Addressing low hanging opportunities, i.e. energy management, will only get you so far. Strategic medium to long term planning, that aligns with organisational goals as well as operational changes, is often needed to make the transition to a low or net-zero carbon operation. While long term measures may be complex & costly, short term efficiency opportunities can have significant carbon, & cost, impact too.

DETA are experts in developing carbon strategies and medium to long-term roadmaps, often over 10 to 30 years. These roadmaps identify the lowest costs of achieving & operating in a future carbon market, & provide a clear path for capital investment as equipment falls due for replacement, or forward economics make changes economically viable.

- ▶ Carbon footprint
- ▶ Carbon strategy
- ▶ Decarbonisation roadmap
- ▶ Fuel switching
- ▶ Strategy & Advisory
- ▶ Life Cycle Assessment (LCA)
- ▶ Embedded carbon analysis
- ▶ Energy auditing

Identified more than

296

kt CO₂

of emission reduction potential across our client sites in one year (2023)

Carbon Strategies & Decarbonisation Roadmapping



Alliance Group
Carbon Footprint

NZL

DETA developed Alliance Group's first carbon footprint assessment, which identified that the majority of their carbon is associated with coal consumption within their boilers. Following an announcement from Alliance in September 2019 that they are seeking to remove coal from their sites by 2030, DETA are currently working with Alliance to develop their roadmap towards this goal. This includes feasibility and business case development of fuel switching projects towards both biomass and electricity, and further energy efficiency improvements.



Sugar Australia Yarraville Refinery
Energy Transition Roadmap

AUS

DETA worked closely with the team at Sugar Australia's Yarraville refinery in Melbourne to develop an energy transition roadmap for the site. The report provided a long-term transition roadmap, identifying the investments to produce low-energy sugar products and realise a low emission future. The approach considered current and future planned operations, reviewed demand-side reduction opportunities and supply-side opportunities, then considered fuel switching options.



Gelita Australia
Energy Audit

AUS

Gelita have been manufacturing gelatine from bovine hide since 1917. DETA was commissioned to conduct a Type 2 energy audit at the Gelita Australia Beaudesert plant near Queensland. The focus of the audit was to review site energy consumption, identify areas for energy reduction and determine the savings and ROI for each energy opportunity identified. A number of Energy Management Opportunities (EMO) were identified with less than five years payback – all reduce overall energy consumption for Gelita and the options included a minimum of 1700 tCO₂-e per year reduction upon implementation.



Nauru
Energy Strategy

NZL

DETA has been engaged by the New Zealand Ministry of Foreign Affairs (MFAT) to lead a team developing a low carbon roadmap for the island nation of Nauru. Along with our partners, we are working to identify the most cost-effective path towards decarbonisation, and will then work with MFAT to deliver, and verify the recommended outcomes. DETA is engaged across the Pacific in a variety of project roles, with a focus on low carbon roadmaps and strategies.

Water & Wastewater Reduction

Water is a critical resource for many of our customers, & using water in the most efficient manner can de-risk business from an operational & consenting perspective. DETA's expertise in water efficiency spreads broader than just water reduction, with experience in yield recovery from waste water, hazardous waste stream optimisation, & water mitigation strategies.

- ▶ Water audit & site reviews
- ▶ CIP Optimisation
- ▶ Water treatment & feasibility development
- ▶ Biogas feasibility studies
- ▶ Project support & project management

On average

11%
WATER
REDUCTION POTENTIAL

identified across
our client's portfolio
due to **DETA** water
saving projects

Water & Wastewater Reduction



Fonterra Takanini
Water Audit

NZL

DETA carried out a water audit of Fonterra's Takanini manufacturing site to review site water consumption and identify opportunities to improve efficiency. Included among the opportunities identified were a variety of quick wins that combined should reduce site water consumption and wastewater discharge by more than 10% and with a payback of less than 6 months. On the back of this success Fonterra has engaged DETA to carry out similar water audits at other Fonterra manufacturing sites.



Hamilton City Council
Water Treatment Plant Efficiency

NZL

HCC water treatment plant provides potable water for the Hamilton city reticulation network. The plant runs 24/7 365 days a year, potentially providing many opportunities to improve energy efficiency. DETA prepared an energy audit that accounted for the energy usage on site and investigated a range of energy management opportunities to reduce energy usage. Much of these savings identified relate to better management of water usage, additional improvements across chemical usage, as well as energy generation opportunities.



Fonterra Reporoa
Water Use & Wastewater Strategy

NZL

DETA assisted Fonterra to identify a shortlist of water minimisation and reuse opportunities at the Reporoa site, based on their potential to reduce wastewater volumes. The shortlisted projects were expected to reduce the water demand at peak by roughly 1,000 m³/d and included opportunities to recover, treat and reuse washwater, CIP and tanker rinse water, as well as projects to eliminate once-through water cooling systems. DETA then carried out a high-level feasibility review of each shortlisted project to assess its likely costs, benefits and other implications.



Taranaki Bio Extracts
Protein Recovery from Stickwater

NZL

DETA provided a peer review of the proposed Protein Recovery from Stickwater project, utilising a new form of filtration technology using vibratory shear enhanced processing. Our review found that the new vibratory shear technology had a much better payback than other alternatives, and although energy and water savings were substantial, most of the improved benefits could be found through yield improvement. DETA is now assisting Taranaki Bio Extracts on other technology improvement projects.

Transport

Globally the transportation sector accounts for around 1/5th* of all greenhouse gas emissions. How businesses move their goods & services to consumers, & the transport infrastructure required just to 'get things done' is an inescapable aspect of doing business today – more so for Australasia, as a remote region it is more carbon intensive to get our goods to market, & to receive products from the rest of the world. It is crucial for businesses who want to remain relevant in their markets to prioritise a focus on decarbonisation efforts in their transportation networks.

The transition towards cleaner & more efficient transportation systems is challenging. There is a clear need for technological advancements, infrastructure development, behaviour change, and coordination among stakeholders. Despite these complexities, DETA's expertise in developing sustainable & low-carbon transport solutions, allows our clients to take real action today.

- ▶ Fleet audits & decarbonisation plans
- ▶ Fuel switch optioneering
- ▶ Electrification, biofuels, & hydrogen solutions
- ▶ Charging infrastructure development

(*source: <https://ourworldindata.org/co2-emissions-from-transport>)

On average
100%
potential abatement
for local transport
networks including
+
15%
fuel efficiency
improvement
across fleets

Transport



NZ Post
Decarbonisation Strategy

NZL

DETA was engaged by NZ Post to identify ways to reduce emissions and create a reduction pathway for their heavy transport fleet. Following consultation with stakeholders, and a review of NZ Post's emissions profile and asset base, DETA developed a list of potential projects to reduce carbon impact by 2040. A timeline and pathway report was developed with projects, recommended actions, and the associated emission reduction potential, that would enable NZ Post to achieve their future net-zero targets. NZ Post have a unique operator/contractor model with many of their operators so positive stakeholder engagement was essential. DETA identified a potential carbon emission reduction per year of 34,000tCO₂-e for NZ Post and created the net-zero plan and project timeline for implementation.



Sorted Logistics
Carbon Footprint

NZL

DETA provided carbon footprinting, strategy, and fleet management advice to Sorted Logisitios. DETA worked through a range of projects including co-loading products to maximise container usage (saving up to 14% of carbon associated with trucking and shipping), improved fleet utilisation, and planning for electrifying certain routes. DETA also engaged with EROAD and sought to improve route management of the client. Sorted Logistics came to DETA as we were working for their client (an industrial processor) who was asking questions of their suppliers – a real sustainable supply chain in action.



Sustainable Business Council
Decarbonising NZ's Heavy Fleet

NZL

DETA partnered with Sapere to produce a roadmap for de-carbonising New Zealand's heavy vehicle fleet across all modes of transport. The roadmap involved assessing the scale of opportunity, and economic viability for various de-carbonisation options including fuel switch (from petrol/diesel to biodiesel, BEV, hydrogen options), improving vehicle efficiencies, telematics, and collaborative efforts (e.g., asset use optimisation across the supply chains). To develop the roadmap, a collaborative approach was adopted, whereby interviews were held with SBC members, key freight operators, KiwiRail, and government agencies. Workshops were used to test assumptions on the potential uptake, timeframe, and economic viability of selected options. The findings from this work are intended to help inform the determination of future carbon budgets.



Ports of Auckland
Decarbonisation Roadmap

NZL

DETA partnered with Sapere to produce a roadmap for de-carbonising POAL's operations and has modelled the financial costs associated with POAL achieving Science-Based Targets. The roadmap and modelling involved an extensive analysis of feasible options to decarbonise the operation of all POAL assets (e.g. boats, straddles, light and heavy vehicles, and heavy machinery) through the replacement of high-carbon fuels with lower-emitting options like biodiesel, renewable diesel, hydrogen or electric battery solutions. The roadmap also included analysis of solutions to reduce electricity use and investigated the feasibility of procuring NZ certified green electricity in the future.

Process Optimisation & Development

Optimising the production or manufacturing process can make a world of difference at an industrial site. But it can often be a challenge to identify exactly which parts of the process need to be tweaked in order to get the plant fully optimised. This is where DETA can help.

- ▶ Process optimisation
- ▶ Materials handling systems optimisation
- ▶ Technology commercialisation
- ▶ Pilot Plant development
- ▶ Process development
- ▶ Pinch analysis
- ▶ Asset performance reviews

Commercialisation of

**3 NEW
PROCESSES**

taken from University
research, to pilot plant,
to full operation,
with **DETA** support

Process Optimisation



Danone Balclutha
Chiller Optimisation

NZL

The milk processing plant at Danone Balclutha was not able to cool the milk to the desired set point, which impacted on the rest of the process. DETA investigated the process, identified that the chiller plant settings could be optimised, and recommended practical actions for the plant to take so that production targets could be met all year round, including:

- ▶ Revising PID control parameters
- ▶ Improved trending within SCADA to identify trips quickly
- ▶ Calibrating evaporator exit temperature probes
- ▶ Altering pressure set points



Waitaki Biosciences
Dehydrator Optimisation

NZL

DETA provided technical engineering support for Waitaki Bioscience to determine why their new dehydrator was not meeting key performance criteria. A thorough process and system analysis by DETA found that the dehydrator tray material was the root cause of the problem. Replacement of the trays rectified these operational issues. DETA is a process and energy partner to Waitaki Biosciences and is currently supporting the development of new process sites.



Kraft Heinz
Blast Tunnel Optimisation

NZL

DETA worked with Kraft Heinz to implement and optimise the operation of new variable speed drives on blast tunnel evaporator fans. This commissioning and optimisation work improved process consistency, resulting in:

- ▶ Reduced product loss
- ▶ Improved product temperatures (from 30% to 1.5% out of specification)
- ▶ Reduced energy consumption (51% reduction for blast tunnel)



Longburn
CIP Optimisation

NZL

DETA delivered a CIP improvement project to target water, energy and chemical reductions across the site. DETA worked with the site and their suppliers to understand current operations, make changes to CIP practices and develop a business case to install new control equipment to allow more formal CIP process changes to occur. The project will reduce total CIP costs by more than 60% once implemented.

Project Delivery

Whether you are looking for a full project delivery service with an industrial angle, or assistance with a part of your project – such as contract or health and safety management, DETA has the solution. We have the expertise to provide as much support as you require.

Front-end

- ▶ Concept & feasibility studies
- ▶ Capital cost estimation
- ▶ Design
- ▶ Technical specifications for procurement
- ▶ Technical & commercial bid evaluations
- ▶ Contract preparation, contractor prequalification & selection
- ▶ Business cases

Execution Phase

- ▶ Onsite contractor management
- ▶ Project scheduling
- ▶ Cost tracking
- ▶ Change management & contract administration
- ▶ Turnkey if requested by the client
- ▶ Commissioning planning & supervision
- ▶ Troubleshooting

Brownfield Site Services

- ▶ Shutdown planning
- ▶ Reliability engineering
- ▶ Building compliance
- ▶ As-building
- ▶ Process control, automation & networking upgrade design

Delivery of projects contributing more than

60 GWH

of **energy savings** across our client sites

Front-end



St John of God Hauora Trust
Heat Pump

NZL

DETA designed and delivered a domestic hot water ring main and heat pump project in an operating hospital environment, under budget, to schedule, and with no LTI's or recordable incidents. Not only that, the project reduced the energy consumption to make hot water by more than 70%, and reduced site maintenance on an aging hot water system. Key to the project's success was the contractor getting involved early, which assisted identifying piping technologies that required no brazing, important for an operating hospital. DETA's close contract management and continuous value engineering throughout the project contributed significantly to its success.



Kraft Heinz
Decarbonisation Delivery

NZL

Following a successful round of energy audits, DETA was appointed to formally develop business cases to seek capital funding. Utilising the internal Kraft Heinz systems, DETA prepared business cases for more than 15 projects, all of which were successfully funded. DETA then undertook full project management of these improvement projects, including full contract management, onsite supervision and verification of savings being achieved.



Hellers
High Temperature Heat Pump

NZL

Following an energy audit, Hellers requested that DETA investigate a high temperature heat pump to reduce thermal fuel usage at their Ashburton site. After a successful study, DETA developed the business case in conjunction with Active Refrigeration, Heller's refrigeration partner. The project was delivered successfully in 2015, and represents the second ammonia HTHP in New Zealand.

The estimated savings have since been exceeded by 38% - a fantastic result that won the Innovation category at the 2016 EECA awards.



Synlait Milk
Separator Capacity Upgrade

NZL

DETA detailed the technical specifications for the tendering of the process, separator supply and building contracts for the 70 m³/hr separator capacity upgrade project. We then led the technical and commercial bid evaluation, managed the contract award and variation processes, reviewed and modelled the site utilities, and implemented the vertical start-up procedure and site-based H&S representation. We are now leading the commissioning and standards compliance.

Execution Phase



Alliance Group
Project Management

NZL

DETA has taken responsibility for the delivery of many technical productivity improvement projects across the Alliance Group. Initially focussing on energy improvement projects, such as water recycling and hot water management projects, DETA are now delivering major capital projects including deaerator and gearbox replacements for major equipment.



Goodman Fielder
UHT Expansion

NZL

At Goodman Fielder, we provided a contract management service to a \$25M process expansion at their Christchurch site. We came onto the project after the project was underway and there was some contractual ambiguity due to variations, resulting in disagreement. Our role was entirely non-technical – we assisted our client and their contractors to reach an amicable solution, and then managed the contract for the remainder of the project. This independent role gave the client confidence that they were getting a complete project, at a fair cost.



Ravensdown
Tank Replacement

NZL

DETA provided a turnkey service to deliver two waste water dosing systems including the replacement of a HSNO certified caustic tank. Both installs required integration with existing plant operations and were delivered with minimal plant disruption. The designs both successfully neutralised site acidic waste water, reducing the impact of the chemical plant on the surrounding environment. Due to the project's success DETA are currently delivering a sulphuric acid tank to HSNO and API standards, with another two tank projects likely to go ahead in the future as part of our ongoing partnership with Ravensdown.



Hanmer Springs
Capstone Generation Project

NZL

DETA identified, developed and delivered the first Capstone generation project in New Zealand, and the first in the world using geothermal methane as a fuel source. DETA initially developed a business case to utilise flared methane at Hanmer, and identified that a Capstone Turbine would offer the best generation potential given a variable fuel supply. DETA then project managed the entire project, from preparation of contracts for equipment and contractors, through to site management and commissioning. The result has far exceeded the initial estimates and is testament to the partnership approach that DETA takes to its projects.

Brownfield Site Services



Talleys Ashburton
As-Building Services

NZL

DETA provided full as-building services for Talley's Ashburton site as part of scoping their expansion project at site. To minimise the amount of additional building required, DETA as-built the existing production lines and site layout in AutoCAD. Talley & DETA teams used the design platform to conceptualise alternative layouts of the lines, looking for different ways to optimise the layout for operational improvements and scale up the production line. The theoretical layouts were analysed for improvements in variables such as – energy efficiency, improved productivity, better use of space, opportunity for scaling production, and efficient plant operation by task, for example separation of wet-dry, clean-dirty areas. Using the CAD plans, different layouts were tested, and changes quickly made, saving time and resources in the planning stage. DETA then provided planning assistance to the site.



Westland Milk Products
Building Compliance

NZL

Our experienced consultants can take the complications out of understanding and meeting your legal building compliance obligations. Whatever your issues we can develop a bespoke offering balancing compliance requirements and the capital cost of implementation. Compliance can be a challenge – DETA can use our technical knowledge, industry insights and ability to draw upon strong council relationships to help make compliance a simple and easy process. At Westland Milk Products, DETA is supporting Westland's internal facilities management team to coordinate with local councils and manage their expectations, develop and deliver on forward project plans, all with the intent of achieving compliant buildings across Westland's sites.



Westland Milk Products
Shutdown Management

NZL

There are few activities on the maintenance calendar that pose a bigger risk to your production than shutdowns. They consume resources, create downtime, and are often plagued by over-runs and restart issues due to poor planning or scheduling. Shutdown Management is key to executing a successful and efficient shutdown programme of work through an integrated process between maintenance works and project works. DETA delivered a shutdown management service to Westland Milk Products during the 2018 winter shutdown and delivered significantly improved outcomes from previously unplanned shutdowns.



Synlait Milk
Reliability Engineering

NZL

DETA has worked with several sites to deliver reliability engineering services, developing the connection between project and operation, and improving the longevity, operability and maintainability of the plant. At Synlait, DETA worked to coordinate the new lactoferrin plant into Synlait's existing reliability engineering systems. This required significant site time, and tight coordination with the Synlait team, as well as contractors.

Australian Case Studies



Sugar Australia Yarraville Refinery
Energy Transition Roadmap

AUS

DETA worked closely with the team at Sugar Australia's Yarraville refinery in Melbourne to develop an energy transition roadmap for the site. The report provided a long-term transition roadmap, identifying the investments to produce low-energy sugar products and realise a low emission future. The approach considered current and future planned operations, reviewed demand-side reduction opportunities and supply-side opportunities, then considered fuel switching options.



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Energy Audit

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Capral Aluminium
Energy Audit

AUS

DETA undertook an energy audit for a complex aluminium extruder in Brisbane. DETA's work identified some quick and easy wins, such as anomalies on their utility invoicing, and developed a clear action plan for Capral to consider for implementation. The identified savings represent more than 5% of the site energy consumption.



Cheetham Salt
Decarbonisation Strategy

AUS

Cheetham Salt, one of Australia's largest salt manufacturers, is motivated to decarbonise its operations & engaged DETA to support. DETA partnered with Cheetham Salt's Site & Sustainability Manager to carry out an investigation on its largest refining facility based in South Australia which resulted in the development of their carbon transition strategy. This has informed the business of its potential pathway to become a net-zero operation & outlines the trigger investments required to achieve. The pathway includes a combination of demand reduction priorities, process optimisation for significant energy-consuming assets, & technology adjustments. It also addresses the integration of renewable supply arrangements for the site, & sets out clear short-term & long-term business objectives for forward operational planning.

Australian Case Studies



NSW Department of Primary Industries
Biogas Feasibility Projects

AUS

The New South Wales government engaged DETA to develop two biogas feasibility projects at selected rural animal processing facilities. One facility was a chicken processing site, & the other was a dairy farm operation where effluent & water discharge could be better utilised. DETA developed a site model of energy & waste flows, & designed a solution for each specific site considering their unique situation & value drivers. The case studies resulted in a concept design for both sites to better utilise their waste streams by producing & capturing biogas to generate electricity & waste heat for their operations in a renewable & innovative way. The project helped address a waste stream by-product for the site, reduce carbon footprints & improve the energy security for the sites involved.



McCain Foods Ballarat
Process Heat

AUS

As a large food processor, McCains in Ballarat requires a significant thermal demand for their site. DETA worked with McCains to understand how a high temperature heat pump could replace natural gas usage for some of their operations, as well as improve the performance of their refrigeration plant. McCains were already working towards a large solar and biogas project & was considering how a Heat Pump could better utilise the electricity generated at the site to further decarbonise operations. The study, supported by A2EP, identified that all of the CIP, washdown, & handwash water could be replaced by heat pump technology with an attractive ROI. McCains remain committed to decarbonisation and are proceeding with many innovative projects, including fully decarbonising their Timaru (NZ) site utilising biomass, as well as large renewable installations across Australian sites. DETA are proud to have supported McCains on their decarbonisation journey.



Lite n' Easy
Life Cycle Assessment

AUS

DETA carried out a life cycle assessment on Lite n' Easy's packaging materials used to transport ready-made meals to their customers. DETA reviewed Lite n' Easy's logistics structure, qualified the carbon impacts of the supply chain and packaging materials, and considered the environmental and multi-use nature of the material options to support Lite n' Easy ensuring their packaging materials are the most carbon friendly, compared to other options. DETA will continue with innovation studies, to support Lite n' Easy on their sustainability journey.



Brown Brothers
Operational Carbon Footprint

AUS

DETA completed a carbon review for Brown Brothers Wineries based in Victoria and Tasmania, which produced an operations carbon footprint for the group. The assessment considered Brown Brothers' scope 1 and 2 emission sources across their processing facilities, vineyards, cellar doors & administration functions which has allowed the business to identify carbon sources and as a result, plan for actions around priority areas.

We are **DETA**. To achieve our strategic goal of removing 2million tCO₂ equivalent emissions every year by 2030, we need to partner with organisations that are committed to accelerating their decarbonisation journey.

Beginning with the right help & support makes it easy to start – and every step makes a difference to positive climate action.

Collaborating with our people on projects is one more step towards a sustainable world. We bring together expertise, innovation, and shared goals, empowering businesses to make a meaningful impact & create a better outcome for all.

Contact us to see how we can help you realise your own sustainable, low-carbon future.



Locations

New Zealand

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