

# Technology Demonstration Fund — Project list

Applicant	Location	Project description	Financial year contracted	Co-funding paid*	Energy savings** (kW)
Kiwirail — Aratere	Wellington	Installation of EnergoProFin propeller hub cap on Aratere propeller to improve efficiency by reducing energy losses from water swirl.	2017/18	\$100,000	2,610,000
Canterbury District Health Board — Burwood Hospital	Christchurch	Installation of an advanced wood-energy biomass boiler system for hospital use.	2013/14	\$300,000	-
AFFCO New Zealand Limited	North Island	Ultrasonic leak detection surveys of compressed air systems.	2013/14	\$25,760	48,787
Longveld Limited	Hamilton	Installation of VSD air compressor to replace the existing air compressor.	2014/15	\$25,400	120,000
Leaderbrand	Gisborne	Displacement of existing harvest trailers, which are towed by diesel tractors, with two self-propelled battery electric harvest trailers.	2022/23	\$110,000	320,000
Ngai Tahu Tourism	Queenstown	Conversion of a jet boat to 100% electric propulsion, including river trials and operation in tourism.	2019/20	\$200,000	641,772
Northern Arena	Auckland	Installation of two air source, large-scale tandem compressor heat pumps to heat pool water and replace the existing system.	2015/16	\$61,192	368,523
Open Country Dairy	Invercargill	Installation and commissioning of a new 13MW electrode boiler as part of the Awarua powder plant expansion.	2019/20	\$200,000	-
Onsen Hot Pools	Queenstown	Installation of 4 air source heat pumps to provide ~39° water, storage tanks, feedwater heat exchangers from waste pool water, and a metering system.	2018/19	\$45,000	1,152,000
Hellers Limited	Kaipoi	Displacement of an LPG system Ammonia high temperature heat pump system using waste refrigeration heat to provide ~65° water.	2013/14	\$25,000	1,406,000
Ovation	Waipukurau	Installation of Ammonia heat pump components to repurpose waste refrigerator heat and replace an existing hot water system.	2018/19	\$100,000	1,069,000
Groundscape	Auckland	Two electric, commercial-grade mowers capable of autonomous, remote or manned operation, for grounds maintenance.	2023/24	\$20,000	51,237
45 South Orchard	Cromwell	Use of six autonomous electric mobile plant to support cherry orchard operations.	2023/24	\$100,000	171,273
Forest Lodge Orchard	Central Otago	Fully autonomous electric tractor with a spare battery for use in a cherry orchard.	2020/21	\$46,000	-
Fonterra	Waikato	Conversion of a 43MW coal boiler to biomass fuel handling and storage infrastructure.	2019/20	\$200,000	-
Auckland Council CPECS	Auckland	Installation and commissioning of a new chilled water systems optimisation controller to manage the chiller plant, cooling tower, building flow rates, and temperature.	2018/19	\$24,000	141,114
Central Otago District Council — Cromwell Pool	Cromwell	Replacement of the existing heat recovery system and LPG boiler with a centralised water-sourced heat pump, using the municipal water supply as a heat source.	2021/22	\$87,500	836,000
WCC Botanical Garden	Wellington	Displacement of gas-fuelled boiler heating with electric heating using CO <sub>2</sub> heat pumps for use inside a greenhouse.	2021/22	\$135,000	19,562

\*Project contracted, but funding not yet paid. \*\*Figures not yet available.

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Fonterra	Nelson	Conversion of Brightwater 8MW coal boiler to co-fire with wood chips.	2017/18	\$250,000	430,000
Thymebank	Blenheim	Low-tech conversion of an existing Taymac coal boiler to a boiler fuelled by local biomass waste products for indoor use in glass houses.	2022/23	\$20,000	300,000
Wellington City Council	Wellington	Installation of a 2+ DeCalon system to reduce scaling and corrosion in the HVAC system.	2017/18	\$46,000	93,000
Ravensdown	Ashburton	Nature-based drying of lime instead of coal-based process heat.	2023/24	\$135,000	2,105,025
Urgent Couriers	Auckland	Use of five electric cargo bikes to replace petrol-fuelled vehicles for delivery and pick-up courier services.	2021/22	\$15,000	176,000
Felton Road	Bannockburn	Use of a battery electric drone for aerial delivery of crop protectant on vineyards.	2023/24	\$20,000	16,733
Forest Lodge Orchard	Central Otago	Use of two electric frost fans for the prevention of frost damage to orchard crops.	2020/21	\$50,000	-
Hanmer Springs Thermal Pools and Spa	Hanmer Springs	Small scale co-generation plant using fugitive methane.	2013/14	\$10,000	350,000
Waste Management	Auckland	Replacement of diesel-fuelled hot water high pressure cleaners with electric hot water blasters for cleaning purposes.	2019/20	\$19,616	-
Oceana Gold	Central Otago	Deployment of an electric large mining excavator unit (electric shovel) to replace an existing diesel-powered backhoe excavator.	2021/22	\$400,000	8,657,000
Canterbury District Health Board	Christchurch	Removal of water hardness through electrochemistry, improving heat transfer, reducing energy, water and chemical consumption.	2017/18	\$25,200	141,114
Synlait	Canterbury	Installation of a 6 MW electrode boiler at the Dunsandel dairy plant to generate 10 bar steam.	2017/18	\$250,000	9,730,000
Alliance	Nelson	Replacement of a diesel boiler with an ammonia heat pump to produce 85° water.	2018/19	\$250,000	1,018,200
Ruapehu Ski Club	Mt Ruapehu	Installation of an advanced microcontroller to optimise the supply of hot water and monitor the energy consumption of a previously installed heat pump.	2018/19	\$12,000	91,000
Christchurch Airport	Christchurch	High temperature heat pump (for heating and chilling) to replace fossil fuel boilers and ageing chillers.	2018/19	\$200,000	3,962,500
Biotelliga / Endogen	Auckland	LED plant lights in a laboratory growing test crops.	2017/18	\$13,600	49,673
Nelson Pine	Nelson	Replace breaking resistors with regenerative drives to recover electrical energy to move layup shuffles and cranes.	2019/20	\$16,200	-
JS Ewers	Nelson	Retrofit of thermal screens to glasshouse to improve its thermal envelope and reduce the usage of coal for heat through increased efficiency.	2018/19	\$50,000	4,684,000
Sawmill Brewery	Matakana	Installation of an anaerobic wastewater lagoon and capture of biogas from CAP to use in a boiler and displace base case LPG usage.	2023/24	-	270,000
Nicholson Poultry	Waikato	Solar PV, battery energy storage system and hot water heater pump to support electrification of a poultry farm.	2024/25	-	-
Milford Sound Power	Milford Sound	500kW/1000kWh Lithium Iron Phosphate (LFP) battery energy storage system.	2024/25	-	-
Queenstown Airport	Queenstown	Installation of a 1MW/2MWh battery energy storage system.	2024/25	-	-

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Fairbank Farms	Southland	Installation of a 50kW milk chiller and a 50kW/100kWh battery energy storage system.	2024/25	\$70,000	-
Juice Products	Washdyke	Provision of a 200 litre conical vacuum dryer for drying carrot pomace.	2024/25	\$144,833	-
Kahiwi Wines	Mt Pisa	Use of a battery electric drone for the aerial delivery of crop protectant in vineyards.	2024/25	-	-
Gravure Packaging	Petone	Removal of printing press that uses natural gas to dry product and installation of an electric drying press.	2024/25	-	-
Peregrine Winery	Central Otago	Displacement of diesel pots with three electric frost fans to protect against frost damage to two vineyards.	2023/24	\$67,500	336,267
Mt Hutt Lime	Ashburton	Use of a fully electric jaw crusher powered by a tethered grid connection in a quarry.	2023/24	\$187,500	1,766,667
Electric Boat Company	Kerikeri	Use of three electric boats equipped with electric drive motors and battery energy systems as part of a boat hire business.	2020/21	\$40,000	175,000
Terra Lana	Christchurch	Displacement of an LPG oven with an electric thermo-bonding oven.	2022/23	\$350,000	639,000
East By West Ferries	Wellington	Demonstration of a fully electric, battery-powered ferry on the Wellington to Eastbourne ferry route.	2018/19	\$87,500	-
Aylesbury Walnuts	Christchurch	Use of a battery-electric, commercial grade ride-on Mean Green EVO 74 mower with 35kWh battery capacity for in walnut orchards.	2022/23	\$20,000	41,600
Thode Trust	Te Puke	Use of a battery-electric, commercial grade Mean Green EVO ZTR riding mower with 35kWh battery capacity for kiwifruit and other orchards.	2022/23	\$20,000	27,733
Waiheke Golf	Waiheke	Use of a battery-electric, commercial grade ride-on Mean Green EVO ZTR mower with 35kWh battery capacity on a golf course.	2022/23	\$20,000	32,000
Porirua City Council	Porirua	Use of a battery-electric, commercial grade ride-on Mean Green EVO 74 mower on city parks and grounds.	2022/23	\$20,000	68,075
Robson-Williams	Canterbury	Conversion of a second-hand diesel tractor to battery electric vehicle to support lifestyle block operations.	2024/25	\$7,500	-
Lincoln University	Christchurch	Use of an electric tractor to support solar PV and agriculture co-production at the Lincoln University Energy Farm.	2023/24	\$27,000	31,733
Sudima	Auckland	Use of an electric induction wok in a hotel's commercial kitchen along with existing gas wok.	2022/23	\$13,000	160,000
Smith Cranes	Auckland	Crane Power UPS system to power tower cranes and personnel hoists, removing the need for diesel generators.	2022/23	\$105,000	864,000
AFFCO	Napier	Replace dewatering decanter with a hydraulic filter press.	2019/20	\$64,000	360,000
Inghams	Waitoa	Installation of a geothermal high temperature heat pump utilising low enthalpy geothermal energy to heat bore water to between 55° to 77°.	2024/25	-	-
Treasury Wine Estate	Marlborough	Displacement of two diesel tractors with two hybrid UGVs for 60% fuel savings.	2024/25	\$220,000	-
Clearwater Gardens	Christchurch	Two air source heat pumps to provide medium temperature (40° to 50°) hot water to heat the glasshouse.	2022/23	\$17,250	85,333
Lower Hutt — McKenzie Pool	Lower Hutt	Replacement of a gas boiler with a heat pump.	2021/22	\$100,000	142,000
Auckland Council — Birkenhead Pool	North Shore	Replacement of a gas boiler with a heat pump.	2021/22	\$165,000	940,000

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South Taranaki District Council — Hawera Aquatic Centre	Hawera	Replacement of a gas boiler with a heat pump.	2021/22	\$140,621	1,243,000
Waikato District Council — Huntly Pool	Huntly	Replacement of a gas boiler with a heat pump.	2021/22	\$158,000	647,000
Dunedin City Council — Moana Pool	Dunedin	Replacement of a gas boiler with a heat pump.	2021/22	-	3,603,000
Sunday Pets	Te Puke	Use of a 2450MHz, 16kW electric microwave oven to displace gas process heat in pet food manufacturing.	2023/24	\$125,000	1,290,000
Sullivan Farm	Taranaki	Use of an ice bank milk snap chilling system until with full heat recovery to reduce milk temperature from ~18° to 4-5°.	2017/18	\$14,625	12,000
Joshua Cymbidium	Pukekohe	Use of 24 vertical dehumidification/circulation fans to control humidity in a 6,000 square metre greenhouse.	2023/24	\$17,500	135,000
McCain	Timaru	Use of pulsified electric field technology to remove process heat by pre-treating potatoes to aid cutting and replace steam energy from coal.	2019/20	\$250,000	13,280,608
Bremworth	Papatoetoe	Installation and commissioning of a radio frequency system to dry wool yarn, giving greater consistency and efficiency.	2021/22	\$176,000	909,000
Forty South	NZ	Use of Smart Padlocks at communication tower sites to test the performance of the equipment and access protocols in operational conditions.	2024/25	\$187,500	-
Asaleo Care	Kawerau	Upgrade of a vacuum system to a Runtech turbo 600 vacuum blower that will reduce electricity consumption by 50%.	2019/20	\$100,000	4,300,000
AFFCO	Wairoa	Replacement of five hydrovane vacuum pumps with two variable speed screw vacuum pumps.	2017/18	\$44,000	203,000
Taupo Scoria	Taupo	Use of geothermal energy in combination with a high temperature heat pump to enable pozzolan from pumice to be used in Portland cement for concrete.	2024/25	-	-
University of Waikato	Waikato	Installation of a 50kW steam generating heat pump.	2024/25	-	-
Green Gorilla	Auckland	Displacement of a diesel materials handler with a tethered electric machine to load construction and demolition wood for further use.	2023/24	\$65,436	136,667
Leaderbrand	Gisborne	Replacement of a forced air cooling system with a vacuum cooling system to improve product quality, shelf life, and energy efficiency.	2021/22	\$51,297	377,000
NZ Gourmet	South Auckland	Use of 12 vertical recirculation fans in a greenhouse to circulate air, enable the crop to tolerate increased humidity, and decrease energy needs.	2023/24	\$4,740	126,111
Taranaki Bio Extracts	Taranaki	Installation of a vibratory shear enhanced process (VSEP) filtration and dryer system to treat stick water from the rendering process.	2017/18	\$100,000	11,473,000
Metro Sports	Christchurch	Recovery of waste heat from the municipal sewerage system for the heating of the Metro Sports facility and its pools.	2019/20	-	658,000
Palmerston North City Council	Palmerston North	Design and installation of a new food waste co-digestion system for the existing anaerobic digesters at their wastewater treatment plant to generate electricity from its produced biogas.	2017/18	\$56,362	1,752,000
Findlater Sawmilling Limited	Invercargill	Installation and fine-tuning of a wood briquetting plant to produce wood fuel from shavings and displace a current sub-bituminous coal-powered system.	2017/18	\$56,689	-
Melody Dairies	Hamilton	Installation of a very high temperature heat pump to replace natural gas for the production of infant formula ingredients.	2024/25	-	-
St Georges Hospital	Christchurch	Installation of a ground source heat pump system (GSHP).	2016/17	\$40,000	710,000

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Soar Printing Company Limited	Auckland	Automation of Soar Printing Company's facility using the Ubiquitous Control platform.	2013/14	\$6,630	37,720
The Trustees Of The Sisters Of Nazareth NZ	Sydenham	Installation of a 540kW KOB Pyrot wood fuelled boiler.	2013/14	\$100,000	833,333
Saywell Trusts Partnership	South Canterbury	Electricity generation using biogas from an anaerobic pond.	2013/14	\$42,000	100,000
Simla Farms	Ashburton	Installation of a covered anaerobic piggery effluent management pond and a storage pond to capture methane for electricity generation.	2015/16	\$2,000	169,000
Hurunui District Council Trading as HSTPS	Hanmer Springs	Small-scale co-generation in a Capstone turbine fuelled with fugitive methane from the extraction of geothermal hot water.	2017/18	\$90,000	227,150
Glenarlea Farms Limited	Southland	Covering of an effluent pond to create an anaerobic pond which will produce electricity to heat water for a milking shed.	2016/17	\$49,040	97,000
Lakes DHB	Rotorua	Installation and operation of electro-chemical descaling devices to remove condenser system scaling at the Rotorua Hospital.	2016/17	\$38,000	218,000
Hilton Brown Swimming Pool	Havelock North	Installation of three Airus Air Pear Thermal Equalizers at the Beaumont Swim School.	2013/14	\$2,050	727,988
St Georges Hospital	Christchurch	Installation of EC fans in Stage 2 of the hospital's development plan.	2015/16	\$5,600	260,200
McFetridge	Hastings	Use of a battery electric, elevated harvesting platform for fruit picking and other operations on apple and similar orchards.	2022/23	\$11,606	30,000
Recreational Services Ltd	Auckland	Procurement and operation of two electric ride-on mowers in commercial mowing services.	2016/17	\$13,000	25,600
Kiwirail	Wellington	Addition of water (6–10%) and surfactant (0.1% to 0.5%) to standard fuel oil and blending using a high shear blender to create a fuel oil emulsion.	2013/14	\$44,196	1,613,321
Aotea Energy Centre Monitoring (Economech Analytics for Auckland Council)	Auckland	Performance analysis of the Aotea Centre heat pumps.	2019/20	\$6,810	N/A
Southern Belle Orchard	Matamata	Displacement of a mechanical venting system with a heat pump based dehumidifier in a capsicum hothouse to reduce humidity and prevent plant diseases.	2018/19	\$42,727	179,217
Goodman Fielder — HB Bakery	Napier	Displacement of a gas boiler with an air-to-water heat exchanger to recover heat from the gas oven flues.	2015/16	\$100,000	750,000
Urban Green	Wellington	Growing food within city to supply restaurants, thereby reducing food miles.	2017/18	\$12,320	63,672
Ports of Auckland Ltd	Auckland	Installation and trial of high powered, energy efficient lighting in the port.	2016/17	\$50,000	1,172,832
Capital & Coast District Health Board	Wellington	Replacement of existing theatre lighting with fully NATA certified cyanosis LED tubes.	2016/17	\$21,456	49,000
Mondelez Ltd (Cadbury)	Dunedin	Replace an existing low efficiency Fiat plat 1 tonne chocolate Melter with a more efficient design that uses heated pipes and increased surface area.	2015/16	\$14,445	84,000
Tendercare Franchising Limited	Rotorua	Installation of an ozone laundry system in a new commercial laundry facility.	2015/16	\$29,200	260,200
Air New Zealand	Auckland	Installation of dynamic polarising filters in the air handling unit for the Air New Zealand lounge in the international terminal of Auckland Airport.	2014/15	\$18,260	25,500
Airport Farm	Taranaki	Installation of a patented heating and ventilation system, DACS, in eight new poultry sheds.	2018/19	\$70,000	3,670,280
Ovation New Zealand	Waipukurau	Installation of variable speed drives on fans and compressors for refrigeration.	2013/14	\$49,882	981,980

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Invercargill City Council	Invercargill	Demonstration of a 70kW Entec generator to convert biogas to electricity.	2013/14	\$81,730	356,606
Canterbury Linen	Christchurch	Installation and operation of a biomass fuel delivery system for a new biomass boiler at a new laundry development site.	2019/20	\$100,000	2,548
Wholesale Distributors Limited — The Crossings	Christchurch	Installation of transcritical refrigeration technology and dual path HVAC to supply hot water requirements at a Fresh Choice store.	2017/18	\$40,000	237,097
Food Partners	Auckland	Replacement of conventional refrigeration methods with vacuum cooling for meat and pasta products from 85° to 5° in an expanded production line.	2019/20	\$50,000	438,942
Rylib Dairies Limited	Christchurch	Demonstration of a Vari-Cool 22 milk chilling system.	2014/15	\$29,000	31,424
Inniskillen Dairy	Culverden	Demonstration of a Vari-Cool 22 milk chilling system.	2014/15	\$29,500	24,089
Meddo Farms Ltd	Waitoa	Demonstration of a Vari-Cool 36 milk chilling system.	2014/15	\$29,000	41,553
Spark Trading NZ	Auckland	Installation and commissioning of the Vigalent datacentre cooling management system.	2014/15	\$45,000	517,000
Elastomer Products Limited	Christchurch	Heat recovery ventilators with LPHW coils, a change of single split ait conditioning to VRF; simultaneous heating and cooling systems.	2013/14	\$27,776	122,200
Whangarei Council — Wastewater treatment plant	Whangarei	Installation of a biogas generator at the wastewater treatment plant to produce an estimated 570,000kW per annum of electricity and heat for on-site consumption.	2016/17	\$79,640	258,720
			<b>Total</b>	<b>\$8,252,189</b>	<b>101,160,479</b>