



SynergyHeat



smart hot water

Smart hot water management systems

DEVELOPED AND SUPPORTED BY FLEX-ABLE.

DISTRIBUTED BY ALLAN'S SUPERHEAT.



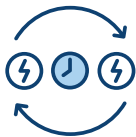
The SynergyHeat controller is a compact unit connected to your switchboard and cylinders to monitor and drive hot water production.

SynergyHeat connects to all makes of hot water cylinders.

SynergyHeat helps your business grow!



SynergyHeat improves hot water efficiency and reduces operating costs with **Just In Time** heat optimisation.



SynergyHeat automatically shifts water heating to low-cost power periods reducing your energy costs.



SynergyHeat monitors water heating operations to help optimise procedures.



SynergyHeat's maintenance alerts help reduce downtime.

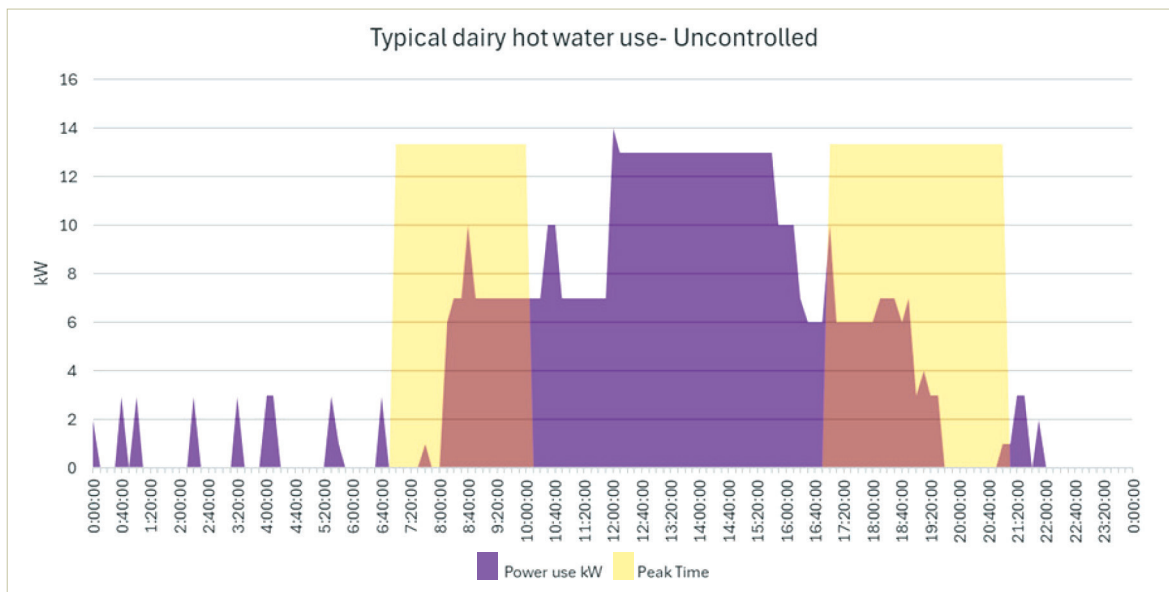


SynergyHeat reduces carbon emissions.

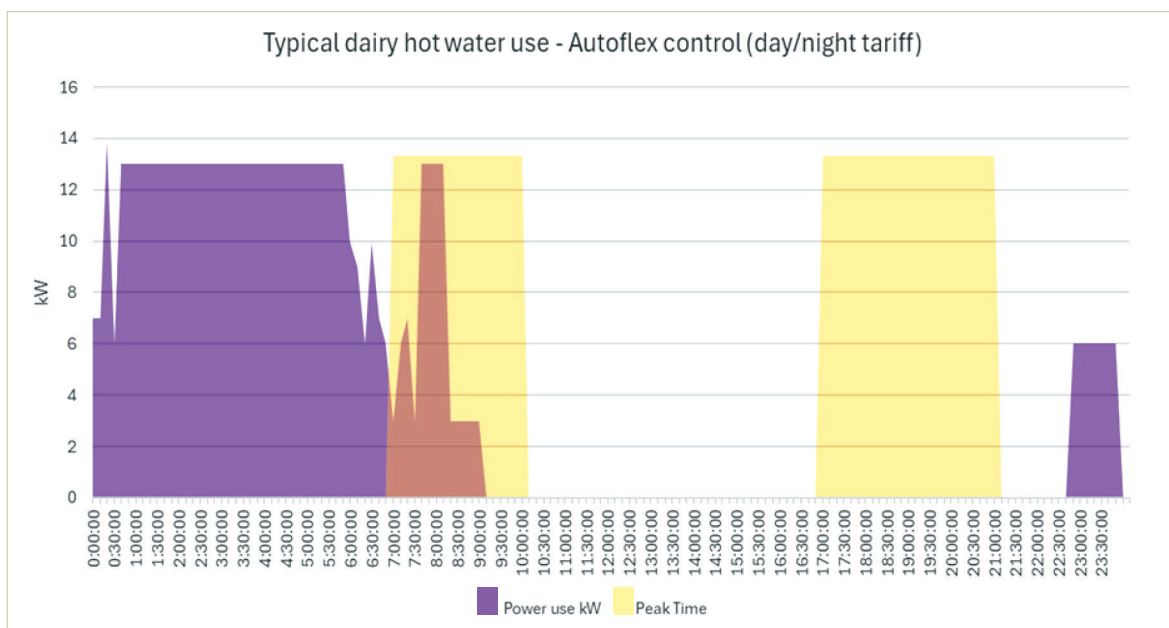


SynergyHeat is home-grown New Zealand technology specially developed for the dairy industry.

SynergyHeat in action – same hot water, lower cost!



Before: Heating during the day and in high-cost peak times.
Standby power can be seen as top-up heat between midnight and 8am.



After: Heating shifted into the night as much as possible for cheaper power and a reduction in power consumption used to keep water hot when it's not needed.

Examples of real savings

These are the savings achieved by installations at seven Canterbury dairy farms:

Location	Delivery network	Cylinder number and size	Heat recovery	Annual savings
Leeston	Orion	2 x 800L	No heat recovery	\$3853
Hinds	EA Networks	2 x 800L	Mahana Blue	\$1622
Eiffelton	EA Networks	2 x 800L	10+ years old	\$2606
Hinds	EA Networks	2 x 600L	No heat recovery	\$2628
Seafield	EA Networks	2 x 1000L	No heat recovery	\$2620
Hinds	EA Networks	2 x 600L	No heat recovery	\$1806
Southbridge	Orion	2 x 600L	No heat recovery	\$3825



Further examples of potential savings

These savings were made when SynergyHeat helped identify issues that were remedied.

Field story 1 – annual savings increased \$3,300

SynergyHeat was installed on a site with a heat recovery system that initially saved about \$1,700 annually. SynergyHeat's ongoing maintenance identified some issues with the heat recovery, leading to a visit by a technician. After the fix, total savings improved to approximately \$5,000 per year.

Field story 2 – annual savings \$5,000

A customer told us that he only did one hot wash in the morning and "that was it". Flex-Able started monitoring and optimising the site, and noticed some odd drawdowns of hot water in the afternoon. Our data was presented to the management team and it was disclosed "some extra washing was being thrown in for good measure, here and there".

Some changes to operational practice and site achieved an annual saving of approximately \$5,000.

This shows the power of data helping to make informed decisions.

Field story 3 – annual savings \$1,500

Flex-Able can see your thermostat setpoint. This helps you keep water at the correct temperature. But did you know this can save operational costs over the entire year? For example:

800 litres of water heated to 15-83°C = 62kWh per heating.

800 litres of water heated to 15-93°C = 72kWh per heating.

Difference = 10kWh = estimated additional heat loss to maintain 10 x 300 days of operation x 2 reheats per day = 6000kWh per year.

6,000kWh x 25 cents per kWh = \$1,500 in potential annual savings!

Carbon emissions reduction – lighter on your wallet and the planet

SynergyHeat – empowering smart energy consumption

While electricity prices are more expensive at peak times, the electricity produced in these times can have a significantly higher carbon footprint. This is because peak generation is often supported by coal and gas fuelled power plants.

1.8 ton CO₂e reduction in emissions annually*

Cloud-based control allows for co-ordination with renewable energy sources.

As more intermittent renewable energy becomes available it will make sense to heat your water while cheap, low-carbon emitting, renewable energy is available. Having cloud-based control can give you that flexibility.

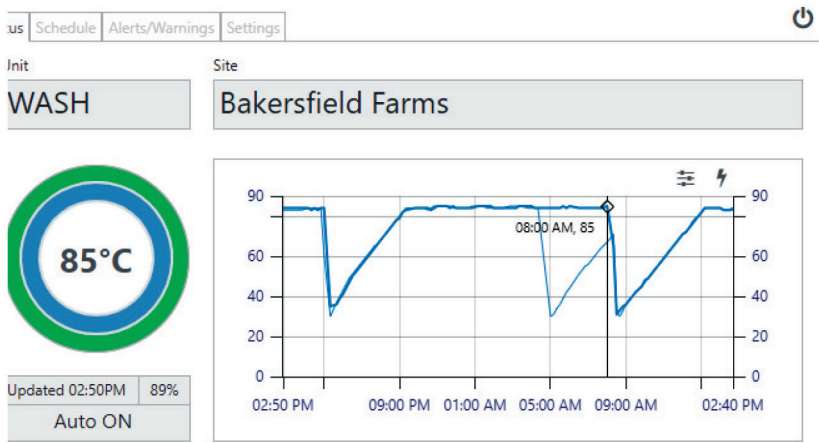
* Carbon-saving calculation is based on shifting 8 hours of heating between two 9kWh hot water cylinders per day. Average carbon intensity used per kWh = 73g CO₂e per kWh. CO₂e = carbon dioxide equivalent. (Source: Measuring Emissions: A Guide for Organisations 2024 detailed guide, table 9, page 44.) A typical peak time value of 150g CO₂e per kWh was used.



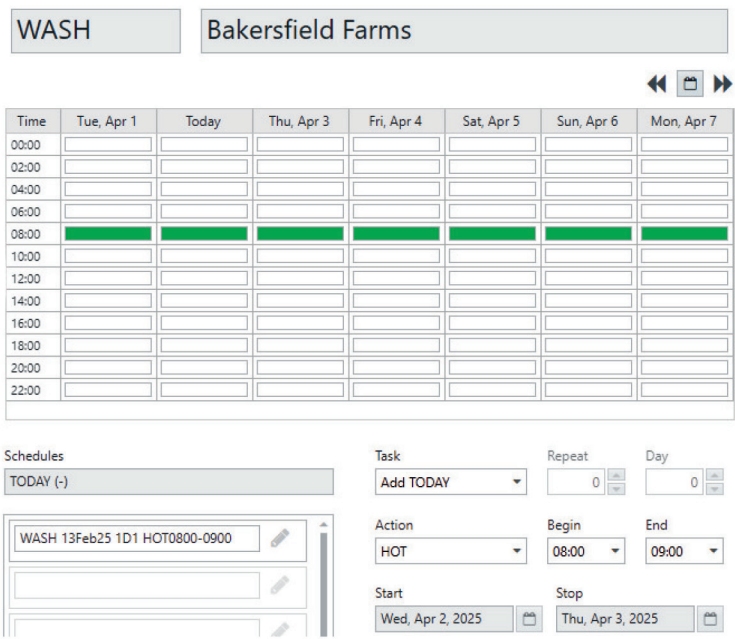
Mount Stuart Wind Farm, South Otago

Data and control at your fingertips

Get easy access to data and gain scheduling control of your operations with SynergyHeat's easy-to-use web portal.



Easy-to-view temperature and usage information.



Simple and easy-to-use scheduling puts you in control.

SynergyHeat's automated alert system

Alerts by text

A 24/7 automated alert monitoring service is provided via text messaging.

Low temperature alert

A scan is made every 24 hours to verify that temperatures achieve a minimum of 80°C. If the system detects that temperatures do not reach 80°C an alert is generated.

High temperature alert

The water heating process is monitored every ten minutes. A note is logged if a temperature above 87°C is detected.

Low current

The heating process is monitored every ten minutes. An alert to check the system is sent if a low current is detected.

Device alerts

Any exception messages generated directly by the controller are reported immediately as an alert. These may include loss of voltage, voltage recovery and over temperature.

Communications failure

An alert is generated if routine communications exceeding one hour are lost.



Dedicated support

Committed to continuous development

Flex-Able uses wireless communication for monitoring and securely logging and storing site data. You have complete access to our platform for total transparency and control of your assets.

Having your system talk to ours in the Cloud allows us to upgrade your system's logic without the need for new hardware.

Flex-Able provides an ongoing fault diagnostic service.

Flex-Able is 100% committed to continuous development of our services and systems.

Annual service charge

These services have an annual service charge. Talk to your local Flex-Able agent about our package, upgrades and discounts for multiple devices on your site.

Retrofitted to your existing cylinders

SynergyHeat is designed to retrofit to all makes of hot water dairy cylinders, old and new.

Payback period on your investment

Typically, customers see a payback period on their SynergyHeat investment of one to two years.



Allan's SuperHeat supplies new cylinders with pre-installed SynergyHeat sensors. We specialise in manufacturing and supplying hot water cylinders for all dairy farm applications with capacities from 180 litres to 1500 litres. Cylinders are manufactured in New Zealand to NZS4604.

SynergyHeat Sales Site Assessment

CUSTOMER	
FARM/SITE NAME	
ADDRESS	
POSTCODE	
BUSINESS PHONE	EMAIL
SITE CONTACT*	
PHONE NUMBER	CONTACT EMAIL

* Site contact is the best person for us to meet at the time of instalment, confirm wash times, show how to use the SynergyHeat system and is the first point of contact if there are any issues.

Name and use of cylinder	Heated by (time of day)	Heated by (time of day)	Heating times per day

- ☐ Site photos, including switchboard, wide view of cylinders and route between cylinders and switchboard
- ☐ Copy of customer's power account demonstrating peak and off-peak times if applicable.
- ☐ Device radio coverage
- ☐ Service charges discussed

Other notes:



All supply enquiries:
Call Stuart Dale +64 2 74 908 150
Freephone 0800 422 000
Email stuart@superheat.nz
www.superheat.co.nz



SynergyHeat is developed and
supported by Flex-Able
Freephone 0800 359 797
Email load@flex-able.co.nz
www.flex-able.co.nz

