# CowTime
# CASE STUDY

## Heat recovery saves heaps of energy

**When David Harvey built his 60-bail rotary eight years ago, he installed a heat recovery system to harvest some of the heat produced from his milk cooling system. Boosted by an LPG hot water service, it provided hot water for cleaning the milking machine. When the LPG wore out recently, David reviewed the options available. Although not very common, the heat recovery system came up trumps.**

At peak of season, David and his wife Cathie, milk 380 cows at Tauwitchere, their property located near Meningie in south east South Australia.

When they built the rotary, LPG was a cost-effective option, but over time the cost of LPG has risen faster than electricity, so David was keen to replace it with something more efficient.

“We looked at all the options including solar and electricity on night tariff,” said David. His research also involved asking other farmers with rotary dairies to go through their power bills to work out what they were spending on hot water. “Most were spending about $2000 a year,” said David.

David looked at the option of doubling the capacity of his existing heat recovery system to 1600 L because the milk cooling system was still blowing excess hot air. He decided it was worth doing if he could at least halve that potential $2000 power bill.

“It costs a dairy like ours about $5000 to install a stainless steel heat recovery system. I worked out it would pay for itself in five years and last about 20. That’s a profitable investment to me!,” he said.

And the result: During the summer months, the heat recovery system gets water up to 75 degrees Celcius, well above the 60 degrees needed for the Harvey’s cleaning procedure. On a coolish day in winter, the heat recovery system gets water up to about 54 degrees Celcius, which is boosted by an electric hot water system.

“It’s a great system because it is energy efficient, cost effective and flexible enough to meet our peak hot water needs during calving time.

But there’s a snag: when CowTime asked David to review his power bills to look at the impact, he discovered the electrician had wired the booster hot water system on HiLow (peak) rates instead of night tariff. “I’ll be doing something about that straight away,” said a rather embarrassed David.

CowTime’s Darold Klindworth says David’s experience is quite common. “It’s amazing how many surprises there are from a quick review of the current energy system,” said Darold. Something as simple as the hot water service being on the wrong tariff, set too high or poorly maintained can make a big difference to energy use and therefore dairy running costs.

CowTime is proudly supported by Dairy Australia, DPI VIC, DPI QLD Sustainability Victoria and the University of Melbourne.

### Did you know?

- water heating and milk cooling account for 80% of energy used in the dairy
- some farmers use four times the energy that others use to harvest the same amount of milk
- most farms use far more energy than they need and could save 40-74% of their energy use
  (based on research conducted for SEAV/Bonlac)

### Want to know more?

- Find out how energy efficient your dairy is. Run your dairy through CowTime’s Energy Monitor (see box for details).
- For more details, phone 03 5624 2221 or visit www.cowtime.com.au

making milking easier

DAIRYAUSTRALIA
Delivering for the dairy industry

Your dairy services levy making milking easier.