

CowTime CASE STUDY

Paul Myers, Gippsland
Saved 300L hot water a day by reviewing manufacturer's recommendations for his wash down routine and cutting out an unnecessary final hot rinse.



Cut energy use by a third, without leaving the farm!

Gippslander, Paul Myers, estimates he's cut energy use in the dairy by a third without leaving the farm. It all started when he ran his figures through CowTime's Dairy Energy Monitor.

Paul, with his wife Linda, and her parents, Beth and Bill Sibson, run a 500-cow dairy herd and 50 ha seed potato enterprise.

Over the past few years they've invested heavily to expand the business. More recently, Paul has been a member of a financial discussion group, which has led him to examine the costs of every aspect of the business. A year ago the 44-unit rotary was converted from a double to a single-operator set up, saving \$35,000 a year in wages but slightly increasing power use.

Paul says there's now no single way he can make a major saving. "But several smaller savings can add up to make a big difference," he said.

Since energy accounts for about 50% of his shed costs, Paul decided to run his power bills through CowTime's Dairy Energy Monitor.

→ Did you know?

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

"On most indicators our energy costs were higher than average so I've set myself a goal of halving energy use which would save us about \$8000 a year," Paul said.

He started with an energy audit of the dairy. "I walked around the dairy and recorded every motor, when it was running and calculated how much it was costing us," he said.

Paul then identified which operations could be re-scheduled to take better use of night tariff which is about half the cost of peak rates.

For example, this season, milking will start half an hour earlier so that its finished before 7am when peak rates kick in. Grain rolling is now done in off-peak times - mainly on the weekends or before 7am if extra is needed during the week.

Paul turned the hot water thermostat down from 90° C to between 75° and 80° and he bought a thermometer to regularly check the hot water system is working properly.

"The thermometer has already proved to be a profitable investment," he said. Paul discovered one of the two hot water services was under-heating and needed a replacement thermostat. "We didn't save any energy but we saved a good few dollars by preventing a milk quality problem," he said.

Paul also saved 300L hot water a day by changing the wash down routine. The original routine included both an acid sanitizer and a final hot water rinse, which was unnecessary.

A minor change to the plumbing in the dairy enabled water from the plate cooler to be used to rinse the platform during milking. This saved running a separate pump that was previously used to supply that water.

And most importantly, Paul briefed his staff on the changes and small ways to save energy such as turning off yard lights once the sun is up.

Although he hasn't received a power bill yet, Paul estimates he's cut it by about a third, without compromising milk quality. All it took was a few hours of his time and a few hundred dollars.

Paul says there's two more steps before he reaches his target of halving dairy energy use.

The next step will be to replace the milk vat, which was due for replacement in the coming six months.

"That cost was in our budget anyway, but the Energy Monitor has changed the way we'll make our decision. Previously we would have focused on cost, capacity and features but now running costs will be a major consideration," he said.

The third step will cost \$1000-2000. Paul plans to install a heat recovery system when the new vat is installed. "Our existing vats aren't suitable," he said.

Paul will also install a larger diameter pipe to take water up the hill to a header tank for water troughs. He's calculated that the heat recovery system and new pipe should pay for themselves within one to two years.

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

Your Dairy Australia levy making milking easier.



Paul Myers cut dairy energy use by a third as a result of conducting an audit of milking shed operations.

→ How energy efficient is your dairy?

- Use CowTime's Energy Monitor to find out how energy efficient your dairy is, and get tips to save energy
- Log on to www.cowtime.com.au and click on the Energy Monitor icon or
- Phone 03 5624 2221 and we'll fax you an Energy Monitor form