



Lion Landcare Grants 2016/2017

Project Case Study

Recipient:	The Bartlett Family Trust
Project Name:	Heat Recovery for Hot Water Heating & Change Dairy Shed Lighting
Location:	Woods Point, South Australia
Funding Amount:	\$11,000
Objective:	To cut shed costs and lower our electricity usage.

Background

In South Australia's Lower Murray River region, the Bartlett family own a dairy farm managed with an environmental and sustainability focus. Over the years, systems have been installed to recycle water used in the dairy shed and water run-off from their flood irrigation watering.

They have also installed solar power and a variable speed drive to reduce energy usage. Due to the unreliability of their power supply the family have purchased a generator to back up power in the dairy shed during blackouts, but this has now become a cost that needs to be managed.

Adding to this is the next generation of Bartletts who want to work on the farm. For them to come home the family needs to reduce the farm's operational costs and expenses so that an additional employee can be paid.

Fundamental to this cost cutting is a maintenance of the family's commitment to its environmental and sustainability goals, and to make way for their children to return to the farm. The Bartletts decided to look at energy efficiency equipment to help achieve this, which is why they replaced dairy shed lighting with energy efficient LEDs and installed a heat recovery system.

Lion Dairy Pride Landcare Grant

After seeing an email about the Lion Dairy Pride Landcare Grants, Kate decided to apply for a grant to fund the installation cost of the heat recovery system and dairy shed lighting replacement.

Once informed of the success of their grant application, work commenced in the first half of 2017 with the purchase of locally sourced LEDs, installed by the Bartletts, followed by the installation of the heat recovery system in the shed.

"We had looked at both [lighting and heat recovery unit] over the past three years and should not have left it this long to do something about it," Kate said.

Kate added the process of installing and upgrading was hassle free but suggested getting more quotes and full installation requirements prior to ordering.

“We did our homework but the cost of plumbing the heat recovery unit into the vat and current hot water service was slightly higher than expected,” she added.

Outcome

Installing the new system and lighting in June 2017, Kate said they have reduced their energy use, but it is still early to estimate the impact on their power bills.

“The new solar power system was installed in the same billing period so it’s hard to work out what impact the lighting and heat recovery unit had as individual installations.”

“We estimate prior to the heat system our hot water costs were likely 10 percent higher than other South Australian businesses. Going forward we will look more closely at the actual hot water system we are using, the existing one is over 10 years old and we believe there could be more efficient ones currently on the market,” Kate said.

The heat recovery system captures heat that had been wasted to warm the water to the temperature needed to clean and sterilise the milking equipment.

In addition, the Bartletts have made further savings by using their Lion Dairy Pride Landcare Grant to replace their 500-watt lights with 150-watt LEDs. Not only a Kwh saving, but they were surprised at the brightness in the new lights ‘lit up the dairy like a Christmas tree’.

“Any infrastructure that lowers the Kwh used is a win-win, especially in the dairy shed,” Kate said.



LEFT: Heat Recovery Unit

Right: LED Lights in Shed

