

WASTE NOT, WANT NOT



Image: MSM Milling

Less than one per cent of Australia's electricity needs are met by bioenergy, however the CSIRO has found that organic sources could provide as much as 20 per cent of the nation's electricity supply in the short term.

ARENA has been supporting a range of bioenergy and waste-to-energy projects since its inception, which involve a variety of innovative ways to capture energy from waste materials including sewerage, abattoir waste, landfill and organic litter.

Bioenergy projects supported by ARENA during 2017-18 include the following:

MSM MILLING BIOMASS FUEL SWITCH PROJECT

Lead organisation: MSM Milling

ARENA funding: \$2.0 million

Total project cost: \$5.4 million

Location: Manildra, NSW

Wood waste from the local timber industry will soon power MSM Milling's canola processing facility in Manildra, NSW. The makers of premium canola oil and stock feed aim to annually save 2500 kilolitres of LPG by converting their plant to run on biomass. This will allow them to take control of rising energy costs in addition to reducing their emissions.

The company will use wood waste from the nearby cyprus pine industry - branches, offcuts, forest thinnings and sawdust - to fuel its boilers to create heat that will be used throughout the canola processing facility. In addition, the oilseed crushing and processing plant will be run on woodchips and other raw residues.

The biomass fuel switch project is one of the first demonstrations of a large-scale food manufacturing company using biomass for thermal energy to reduce their costs and environmental impact.

GOULBURN BIOENERGY PROJECT

Lead organisation: ReNu Energy

Size: 1.6 MW

ARENA funding: \$2.1 million

Total project cost: \$5.8 million

Location: Goulburn, NSW

Thanks to ReNu Energy's innovative bioenergy generation project in Goulburn NSW, Southern Meats will be producing low-waste, low-emissions lamb that could create new market opportunities for Australia's agricultural sector.

The abattoir processes around 4000 sheep every day, using up to 20,000 kilowatt hours of electricity daily.

With support from ARENA, ReNu Energy is building a bioenergy facility that will convert liquid waste from the processing plant into a biogas to fuel a gas-fired electricity generator.

ReNu estimates the generator will be able to produce around 4000 megawatt hours of electricity each year, which is around half the amount used annually by the abattoir.