

Energy Savers Plus Program

targets significant energy savings for a North Queensland water supplier

IMPLEMENTED SOLUTION 

Actual energy savings

40%

Key facts

Industry

Service / Utility

Product

Water

Location

Burdekin

Irrigation

Lift pumps

Solution

Implemented:

Flow meter, variable speed drive, 3 phase AC induction motor, pump optimising ML/kWH

Business profile

Lower Burdekin Water (LBW) is responsible for moving water from the Burdekin River to replenish the subterranean water supply in the Burdekin Delta. The Burdekin Delta is considered the largest replenished coastal aquifer in Australia. LBW is required to manage the groundwater system in an environmentally and economically sustainable way to support the local farming industry which depends on this resource for irrigation, domestic, stock, industrial and urban purposes.

Current energy usage

LBW pump stations and lift pumps that are used to assist in the delivery of water make up a large component of LBW's overall electricity outlay. These pumps were once billed under agricultural tariffs but when they became obsolete in July 2013 electricity running costs increased by over 50%.

These cost increases are passed onto the local farming industry through increased water rates. LBW needed a solution that reduced the electricity running costs of its pumping stations without reducing its ability to pump water.

Action

LBW conducted a pilot to upgrade one of its 17 pumping stations with variable speed drive pumps.

Results

The results exceeded all expectations with a reduction in electricity running costs of around 25% or almost \$20,000 per annum. Importantly there was no reduction in the performance of the pumps.

Energy savings of approximately 40% or 58,000kW were achieved from the initiatives implemented, over a payback period of 2 years.

The Energy Savers Plus Program is funded by the Queensland Department of Energy and Water Supply



Photo courtesy LBW



Energy savings

A summary of the energy savings achieved is as follows:

Solution



Flow meter



Variable speed drive



3 phase AC induction motor



pump optimising ML/kWH

Savings during a 1 year period

Energy savings (kW)	58,000
Energy savings	40%
Operating cost saving	\$20,000
Cost savings	25%
Demand reduction (kW)	105kVA (over 60%)
Payback period	2 years

*Energy savings shown are from an independent auditor's measurement and verification report conducted in 2015 and electricity bills received since implementation.



Photo courtesy LBW

Business feedback

David Sartori from LBW said "We significantly lowered annual electricity costs with the installation of the variable speed drive pumps at Kilrie Gully and we are now investigating how we can roll this out to our other 16 pumping stations. Water allocations and budget feasibility will be factored into the program of work".