



ENERGY

case study

Diesel to gas conversion cuts bills

Reducing pumping costs by \$10 an hour with a diesel-gas mix has put money in the pocket and a smile on the face of irrigated cotton farmer Warwick Wannan.

Warwick, who now farms at “Kurrawombi Downs”, Baan Baa, has always looked for ways to reduce his energy costs. Twenty years ago he had to have fuel delivered by road train to his irrigation farm at Collarenebri.

Since then he started using reduced tillage techniques, which reduced his fuel use by at least 50 percent and a few years ago he introduced rubber tracks on his tractors to reduce wheel slip which in turn reduced fuel intake.

Now he is converting his diesel engines pumping irrigation water from diesel to a mix of diesel and gas. The aim is to replace 30 per cent of diesel with LPG, saving 15pc of the total fuel bill. Installation is relatively straight forward with components mounted on a box close to the engine.

Adding to his joy over reducing pumping costs with the switch, simplified technology in the conversion process recently cut the cost of installing a diesel-gas system by 40 percent.

“Savings per hour are around 10 dollars, so over a thousand hours pumping at current conversion costs is approximately a six month payback period,” Warwick said. “And the increasing price of gas won’t affect the operation too much. It’s tied to the price of diesel – the

first one we did five years ago the price of gas was half the price of diesel, now it’s gone up but the price is still roughly half the price of diesel.”

With support from CRDC, the CottonInfo Regional Development Officers have been working with the National Centre for Engineering in Agriculture (NCEA) to help irrigators benchmark their on-farm energy use.

The purpose of the energy use assessments is to quantify energy use on farm. This involves an assessment to identify where and how efficiently energy is used and to explore ways to reduce energy use and costs.

Phil Szabo of the NCEA says it’s a really good index of performance, akin to water use efficiency.

“An energy assessment involves recording what you are doing on farm and the energy consumed for different activities. It can be as simple as some detailed measurements from the meter box or the bowser, keeping a log of tractor operations and pumping, how much fuel you have used and how many ML you have pumped and then being able to compare this with industry figures,” Phil said.

“For meaningful comparisons between farms energy benchmarks must be standardised and defined. Our team at NCEA have developed an online tool, EnergyCalc Lite, to do just that. Growers can use the tool to assess where energy and cost savings can be made on their farms.”



To take part in an on-farm energy assessment, contact your local CottonInfo Regional Development Officer.

For more information on energy use efficiency or to access EnergyCalc Lite, visit the CottonInfo website: www.cottoninfo.net.au.

*Pictured: Warwick Wannan.
Photo courtesy Stuart Bray.*