

# SUN POWER SAVES MONEY

*A big-thinking company has enhanced the Northern Territory's reputation as a centre for innovation by developing an almost unique hi-tech solar system on a cattle station.*

Award-winning Country Solar NT has saved Tipperary Station, 160 kilometres south of Darwin, a substantial amount of money in annual fuel bills by slashing the use of diesel to power their generators.

People operating diesel generator micro grids would normally require expensive batteries to integrate a significant solar system, both to protect their generators and ensure stable supply.

While those systems typically present a great business case for small or medium power users, they are prohibitively expensive for large power users as very few technology options exist to cater for the big end of town and everything becomes highly specialised.

Country Solar's winning approach was to develop a solution that did not require batteries and, amazingly, this brought the cost down by two thirds for an almost identical fuel saving.

It is only the second solar system of its kind in Australia.

Company owner Jeremy Hunt says the system has taken about 66 percent off the capital expenditure price by not using batteries.

"The savings are enormous."

Country Solar brought in control systems and generator experts to work on the project.

The brain of the system is a hybrid controller, which talks to everything and thus knows which generator is online at any given time.

The system can, therefore, limit solar production in response to load variations so that spinning reserve is sustained and generator loading is kept at a healthy level, which prevents glazing.

"It was considered vital that the solar did not jeopardise energy security or asset health," says Jeremy. "Fuel savings are not worth much if business is disrupted."

Tipperary's Business Development Manager, Tom Polkinghorne, made it clear that the importance Country Solar placed on this issue was one of the key things that gave the station the confidence to proceed.

"Through the good work of Country Solar NT and with assistance from the NT Government's Smarter Business Solutions Program, we were able to successfully install a reliable system, which not only saves us money but also improves the environmental credentials of the station," he says.

Tipperary Group of Stations, which is owned by barrister Allan Myers and a consortium of Australian and offshore investors, is a major business operation with a fascinating history.

It has an estimated carrying capacity of 80,000 head of cattle on 3800 square kilometres and has a homestead, staff and visitor accommodation, a school, workshops, kitchens, powered boreholes, a mango orchard, irrigation and sheds.

The generators used about 1000 litres of diesel a day before the solar system was installed. The consumption now is less than 800 litres per day and discussion are under way for phase 2 to increase the solar by a further 50 percent.

It took 12 weeks to build and design the control system and software, and 14 days to install the system, followed by a week of commissioning.

"We really enjoyed doing this job," says Jeremy. "It was challenging, but highly rewarding as well."

"It's a very innovative way to use solar and generators."

"It opens up a whole new world for solar. There are so many little townships, communities and businesses that could use this system to access cheap solar. At a larger level, this is what the SETuP program with Power Water is also achieving."

Country Solar NT will later this year enter the project in the Clean Energy Council Awards, which are highly regarded in the industry.

The company is one of the leading solar energy installations in Australia – it has saved dozens of Territory business and hundreds of homeowners a small fortune since being set up in 2010.

Rising electricity prices have made the investment in solar energy more attractive than ever – most businesses and householders get their money back in power savings in three years. And all the savings after that are profit.

"That's a great return," Jeremy says. "If someone offered you a return like that on any other investment you'd jump at it."

A residential solar system costs about \$10,000 for the average house and can be installed by a team of experts within six hours.

Country Solar NT installs about two a day.

The cost and timeframe for business and industry obviously depends on the size of the operation.

"We always allow a few weeks for commercial jobs," Jeremy says.

They have carried out many major commercial projects.

For instance, they installed the huge solar system at Casuarina Square, the Territory's largest shopping centre.

And they installed the system on a 54 metre high apartment block in Wood Street, a job that required special safety harnesses for the workers.

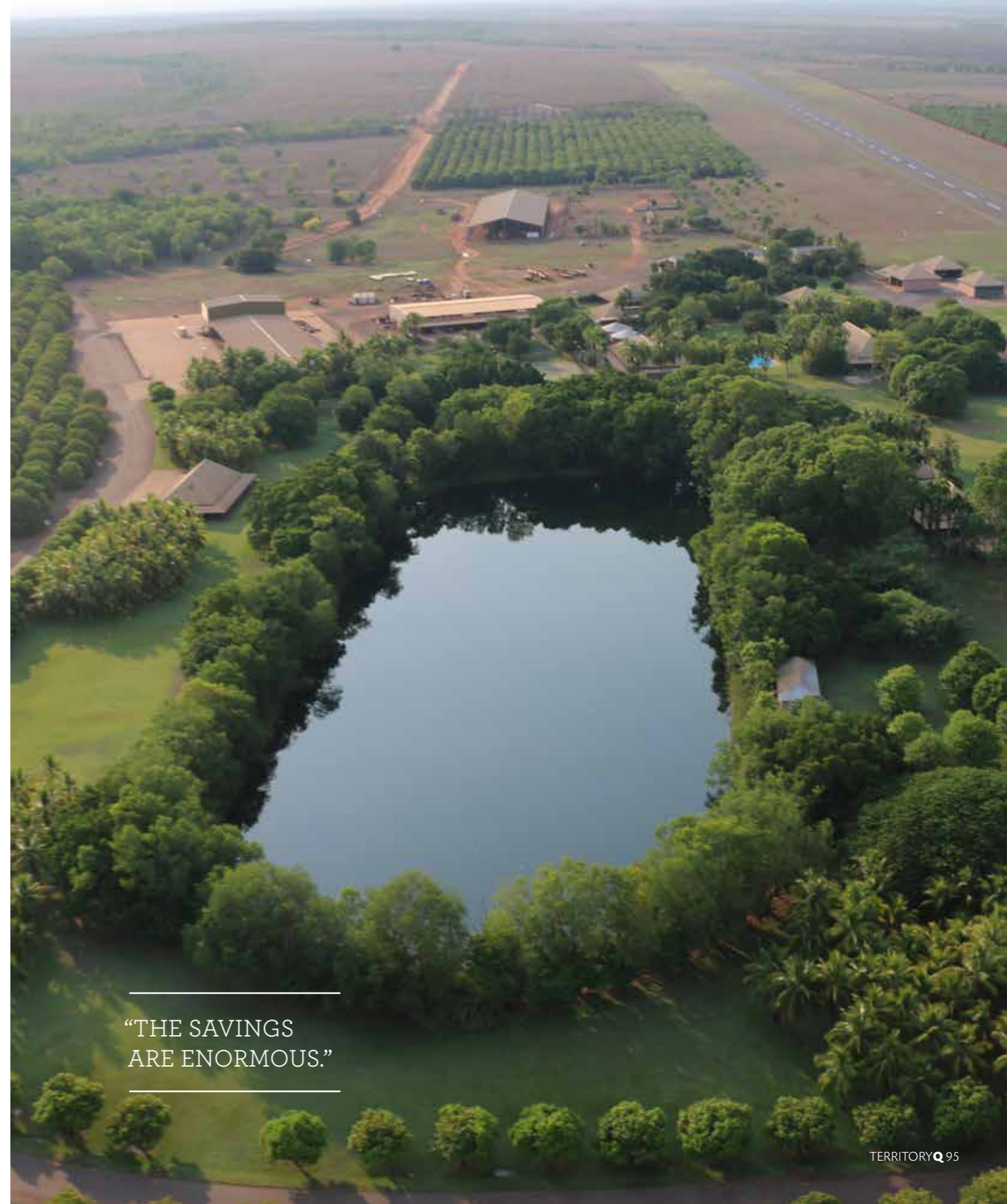
Big companies using 100 kW systems can get Federal Government help by using the solar power as carbon credits.

"Our local service, bespoke needs based design and after sales support is backed by offering class leading products each and every time," says Jeremy. **TQ**

## CONTACT

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TIPPERARY STATION ...  
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