



# Q Energy and the Doomadgee Solar Power Farm

**Stephanie Williams** investigates the establishment of a new solar energy farm in outback Queensland.

IN REMOTE north Queensland, deep in the Gulf of Carpentaria, lies the outpost of Doomadgee, population 1,200. Like most remote communities there is reliance upon traditional fossil fuels like diesel to deliver reliable power.

Mount Isa company Q Energy Solutions answered a call from Ergon Energy in March 2012 to develop the new Doomadgee Solar Farm project – to use the power of the sun during the day to produce electricity to feed power back into the grid. The Doomadgee project is expected to help save around 115,000 litres of diesel each year and reap huge environmental benefits for the local area.

Based in Mount Isa and founded by local electrical contractor Matt Brewster, Q Energy Solutions is experienced in installing grid connect systems and stand-alone renewable solutions. According to Matt, “The growth in the renewable energy industry has expanded at a huge rate over the last decade. Government incentives have definitely aided in this development and the technology has well and truly become affordable for the customer.”

Work hasn’t slowed since the company formed in 2002, which Matt puts down to simplicity and need. “Our recipe is simple – we provide full turn-key energy-saving solutions

for our clients, which in return delivers them the option to take control of their energy overheads.” He adds that “Mount Isa and its surrounding communities are not immune to the rising costs of electricity and we are responding to that market demand by providing a feasible solution.”

But for a company well-versed in residential and small-scale business installations, was it a jump to work on the large-scale Doomadgee Solar Farm?

“In theory it was just a matter of expanding the way we previously approached such installations, then simply ironing out the technical side to interact with the existing electricity network,” he says.

Matt says that the local community was exceedingly welcoming. “Both the local business and the Doomadgee Aboriginal Shire Council have been excellent, and made us feel very welcome throughout the entire project. We would not hesitate to complete other projects up in this part of the country.”

The Doomadgee Solar Farm project presented a few unique issues that would never have arisen for a simple residential installation. For example, the Doomadgee community can be totally cut off in the wet season, for periods of up to six months. ●





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Top to bottom: The early stages of the project; installing the solar panels.

“Working in the Gulf during wet season was always going to be a challenge,” says Matt. “We were cut off for 10 days in January, but the boys on site didn’t complain. A week off was quite a relief after installing 1,056 solar panels in 46 degrees Celsius!”

Matt used local industry to help overcome the site’s remote location.

“The simple logistics of unexpected parts and equipment requirements was challenging,” he says. “However, between the Skytrans air freight service and Ringrose road transport out of Mount Isa, we had fast, cost-effective options available to us.”

Ergon Energy operates 33 isolated networks across Queensland, including the new Doomadgee site. Matt believes the environmental benefits are huge.

“During the daylight hours the solar farm produces electricity and feeds it back into the local network. This power injection is detected by the existing diesel generators, which ramps down production resulting in lower RPM and lower fuel consumption.”

Breaking it down further, Matt says, “there’s a CO<sub>2</sub> saving of over 7,735 tonnes over 20 years, the equivalent of running 54 cars for a year.”

The generators burn diesel 24 hours a day, 365 days a year, so not only are there environmental benefits associated with the reduction of carbon dioxide emissions, the financial savings in fuel consumption and maintenance were a big attraction.

The benefits of solar energy are felt over many years and it’s not a quick solution for saving money. But, as Matt explains, it’s a sustainable choice.

“The long-term cost per kilowatt is favourable toward solar power when compared to the ongoing maintenance costs and rise in fossil fuel prices from diesel generation. Unfortunately, diesel generation is a necessary evil to deliver reliable power generation in remote communities, but we are confident we’ll see a reduction in dependency upon traditional fossil fuels like diesel.”

All customers in Queensland pay the same rates for tariff electricity no matter where they live and it’s no secret that producing energy in remote areas is more costly. Matt believes the benefits are wide-reaching and for all Queenslanders: “Ergon investing in renewable projects now, will, in the long term, directly benefit everyone in Queensland.” 