
Solar System For Kurrajong Pastoral At Crystal Plains

The Situation

'Crystal Plains' is a 3,018 hectare (7,458 acre) buffel grass property located 52 kilometres south of Emerald and 22 kilometres north of Springsure, in Queensland, Australia.

Many graziers consider buffel grass the 'king of pastures', with cattle reaching premium condition and market weight on buffel pastures during summer.

Beef cattle graziers, Chris and Vicki Dmitrieff from Kurrajong Pastoral, purchased the Crystal Plains property in 2016. The property features ten dams, three bores, fourteen grazing paddocks, plus several holding paddocks.

In June 2017, Chris and Vicki decided it was time to upgrade the old line-shaft pump operated by a diesel engine that was supplying bore water from one of the property's bores to the many stock watering troughs. They engaged Authorised Grundfos Dealer, Dowdens Pumping & Water Treatment at Rockhampton, to install a Grundfos solar pumping system at the property.

The Solution

Dowdens Pumping & Water Treatment at Rockhampton began the design of the solar pumping system with a site visit to discuss the cattle graziers needs and record the depth of the bores. The system was required to pump approximately 50,000 litres of water per day directly from a bore to an elevated tank on the property, so a reliable and energy efficient solution was essential.

The solar pumping solution recommended for Kurrajong Pastoral included 18 x 270 Watt Solar Modules attached to 3 x 6 Module Fixed Post Array Frames, a Grundfos Renewable Solar

TOPIC:

Grundfos solar pumping system

LOCATION:

'Crystal Plains', Queensland, Australia

COMPANY:

Dowdens Pumping & Water Treatment at Rockhampton

Inverter (RSI) together with the efficient Grundfos SP7-17 415 V submersible pump.

The system included a Grundfos Renewable Solar Inverter with Sine Wave Filter and Isolation Switch, together with a tank level pressure switch.

The Sine Wave filter is used to limit the high peak voltages that are generated by the RSI and protects the motor from damage. The use of a tank level switch meant the pump only operates when there is demand for water, limiting the running hours of the pump, which helps ensure a longer life. This also meant that the pump would start and stop automatically when needed and eliminated the need for the owners to drive to the bore to start and stop the pump.

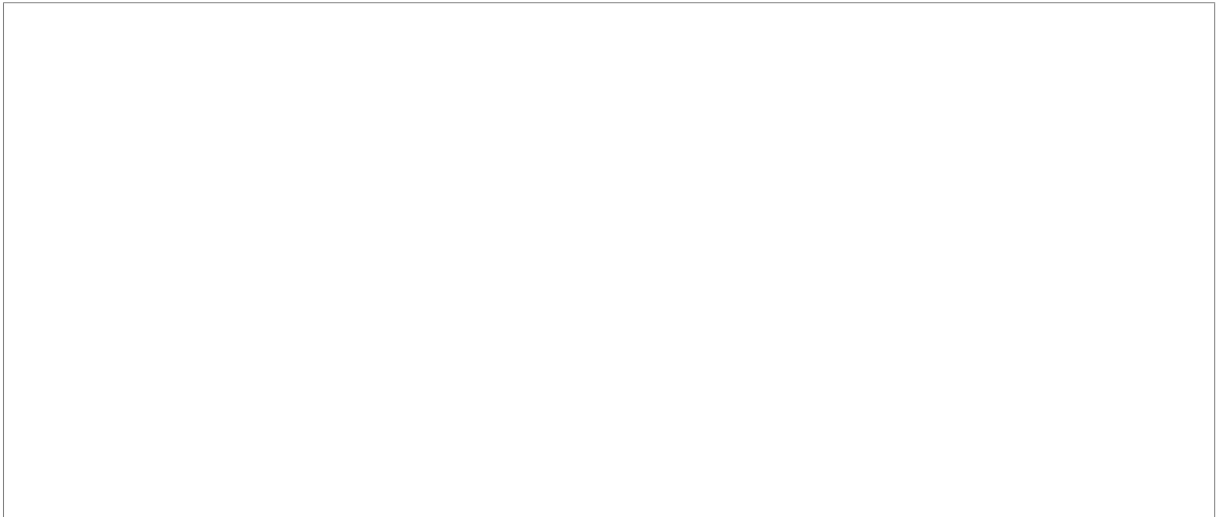
The Outcome

The entire Grundfos RSI Solar Pumping System was designed, manufactured, installed and commissioned on time and within budget by Dowdens Pumping & Water Treatment at Rockhampton.

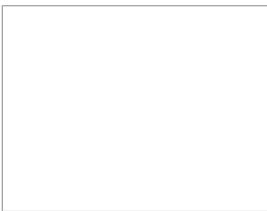
The system has been on-line and operating trouble free since the installation. Chris and Vicki are very satisfied with the system.

Vicki Dmitrieff says, "Our Grundfos solar pumping system has been working efficiently since installation. Although the initial cost of the system was more expensive than a typical generator system, for us, the savings in the long term add up. Not only do we save the time and hassle of driving to the bore to re-start the pump, we've already realised savings on our energy bills, operating costs (such as transporting fuel), installation costs and also expect to see savings on our servicing costs."

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