



COOTAMUNDRA OILSEEDS

Manufacturing/Processing

Reducing Seasonal Demand

AT A GLANCE

THE CHALLENGE

- High demand charges
- Aiming to reduce carbon footprint

THE SOLUTION

- Design and procurement of two 715 kVA grid-synchronised bio-diesel generators
- new main switchboard
- Delivery of Acacia Energy Generation Services

THE IMPACT

- Reduction of net demand charges across the year
- New revenue streams delivered by the addition of generators
- Boosted return on investment
- Total electricity cost reduction of 75%

THE CHALLENGE

Like many of our customers, Cootamundra Oilseeds electricity demand is seasonal in nature. Aligned to the crop timings for various oilseeds, Cootamundra Oilseeds' electricity demand is high when crops are available and lower at other times. Whilst having previously invested in 580kW of Solar PV, Cootamundra Oilseeds was still experiencing high electricity demand charges on their bills and were looking for a solution that would reduce these charges throughout the year.

Cootamundra Oilseeds also has a strong desire to reduce the carbon footprint of their operations, so the solution needed to contribute to this objective.

THE SOLUTION

Using 12 months of interval meter data and electricity market data, and acknowledging that the customer had a 1.0 MVA transformer on the site, Acacia Energy developed a detailed model of Cootamundra Oilseeds' electricity costs. The model demonstrated the savings available to Cootamundra Oilseeds from a variety of different renewable energy solutions, allowing them to make an informed decision on the renewable energy solution best suited to their operational and commercial needs.



Acacia Energy



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THE SOLUTION CONT.

The best solution for Cootamundra Oilseeds was to complement the existing 580kW of ground mount solar PV with:

- Two grid synchronised Caterpillar 715 kVA bio-diesel generators fitted with Commapp controllers and configured as an embedded generator
- A new 1,250 AMP Main Switchboard with protection and control equipment that allows synchronised genset operations.

Cootamundra Oilseeds were already contracted for their electricity retail supply so elected to engage Acacia Energy's Generation Services to derive ongoing value from the investment in the renewable energy solution.

Under the Generation Services agreement Acacia Energy will use its cloud-based OBE platform to autonomously monitor and control the renewable energy solution to achieve the lowest cost of electricity in every (5 minute) trading interval in the National Electricity Market. This optimisation takes into consideration the cost of purchasing energy from the grid, the cost of critical peak demand, the energy available from the solar array, the revenue that can be achieved by running the generator and from providing FCAS services.





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THE IMPACT

Acacia Energy's Renewable Energy solution of 2 x 715kVA generators integrated with Acacia Energy's OBE platform allowed for the mitigation of peak demand charges from Cootamundra Oilseeds electricity bills. The OBE platform works behind the scenes to analyse the National Energy market to identify the lowest cost of electricity, 24/7, which drastically reduces Cootamundra Oilseeds bills over high-demand electricity periods.

Additionally, Acacia Energy's Generation Services with their AEMO accreditation allows the participation the generators on the FCAS market, providing new revenue streams that will speed-up payback of initial investments and offer revenue into the future.

The combination of grid energy displacement and new revenue streams delivers a total electricity cost reductions exceeding 75%.

