

How Tatiara Trucks cut energy costs by 80% without a grid upgrade



CUSTOMER

Tatiara Truck and Trailers

LOCATION

Bordertown, SA

INSTALLER

Bordertown Pumps and Refrigeration

SYSTEM

100kW / 240kWh
RedEarth Dingo

RESULTS SNAPSHOT

Reduced Energy Costs

80% reduction in annual energy spend

Avoided Grid Upgrade

Expanded available capacity from 200A to 340A

Avoided Demand Charges

Approximately \$20,000 annually

RESELLER



ABOUT TATIARA TRUCKS

Tatiara Truck and Trailers is situated in Bordertown, SA on the Dukes Highway in South Australia. Being on a busy main freight corridor between Adelaide, Melbourne and Mt Gambier, the company is one of the region's largest heavy vehicle repair and maintenance providers.

They operate a busy workshop during business hours and provides an after-hours breakdown service to repair heavy vehicles on the roadside or back at its workshop. Reliable power is critical to keeping freight operators moving and minimising downtime for customers.

When Tatiara Trucks outgrew the available grid capacity at their site, they needed a solution that could support business growth and reduce their rising electricity bills. But most important of all, being able to provide reliable backup power for their day-to-day operations as they experienced a ten second lag if their diesel generator kicked in.



RedEarth's containerised Dingo solution

THE CHALLENGE

Tatiara Trucks had installed a 30kW rooftop solar system more than a decade ago that provided their energy requirements. As the business expanded, the existing system was no longer enough to offset their growing energy demands. The site was operating on a 200A grid connection and it regularly drew over 100A during business hours. During peak periods, this might occasionally exceed 200A and it increased their need for grid electricity.

The cost of upgrading their grid connection through its DNSP to increase the supply of electricity was prohibitive along with rising electricity bills which had climbed to \$100,000 per year. Tatiara Trucks needed greater energy resilience as it had 60 employees working on site that needed uninterrupted power to keep their operations moving.

A diesel generator that acted as a backup system could only provide a limited amount of backup energy and it had a 10 second delay in powering up in an event of a grid outage and this created disruptions to the business it could not afford to experience.

Patrick Merrett, Director of Bordertown Pumps and Refrigeration said, "The cost of increasing the supply of grid electricity was too high and a network upgrade just wasn't a financially viable option for Tatiara Trucks. As their energy requirements increased, we needed to come back to the heart of what the issue is and that was to reduce their energy costs dramatically and to deliver backup protection for the entire site with the installation of a battery."

THE SOLUTION

Bordertown Pumps and Refrigeration installed a customised 100kW / 240kWh RedEarth Energy Storage containerised Dingo commercial battery energy storage system (BESS) that was paired with 276 x 440W bifacial solar panels and an Integrated Cummins diesel generator to provide backup if required.

RedEarth delivered a customised 10-foot container with the battery that had a 100kW inverter capacity through dual 50kW inverters and 240kWh battery storage in air-conditioned cabinets. **This containerised system was designed specifically for the site requirements, allowing for faster installation and streamlined commissioning.** Once delivered, the system was simply craned into place and connected on site, significantly reducing installation time and disruption to the business.

For Bordertown Pumps and Refrigeration, being able to partner with an Australian battery manufacturer was an important part of the project. With a complex commercial installation requiring **customised engineering, local support and ongoing collaboration** were key factors in selecting RedEarth.

Merrett said RedEarth's local team and responsive support made the process straightforward from design through to commissioning. He added, **"We wanted to work with a trusted Australian battery manufacturer and RedEarth Energy Storage delivered on every front. The installation was straightforward as the cables were pre-connected when the battery was shipped. The RedEarth customer support team was only a phone call away in Darra and they answered all the questions we had during the installation and commissioning."**

Owners of Tatiara Trucks and Trailers, Dylan Jenkin and Jaime Virgin said, "For a business that supports freight operators who are always on the move, having reliable power and lower operating costs has made a real difference."

"The RedEarth Energy Storage battery has allowed us to **increase our available energy capacity, dramatically reduce our electricity bills and improve energy security at our location.**"

The new RedEarth battery increased the site's available capacity to 340A, allowing

Tatiara Trucks to continue expanding without requiring a major grid upgrade. By combining solar, batteries and an intelligent energy management solution, the battery now supplies approximately 80% of the company's annual energy needs.

Since commissioning the new RedEarth battery system, Tatiara Trucks has dramatically reduced its reliance on grid electricity. During recent summer months, **electricity bills have been close to zero, contributing to an overall reduction in annual energy costs of approximately 80%.**

Having a RedEarth battery has also helped the business avoid significant network demand charges. While the battery was being installed, Tatiara Trucks' growing electricity consumption pushed the site above a network threshold that would have introduced demand-based tariffs and additional supply charges.

As a workshop, it regularly experiences short periods of very high electricity demand during heavy engineering and fabrication work, creating costly peak loads. By using energy storage to smooth these spikes, the RedEarth battery kept Tatiara Trucks grid demand below the critical threshold, helping it to avoid recurring charges that could have added around \$20,000 per year to the company's electricity costs.

LOOKING AHEAD

Recent volatility in global energy markets has highlighted the importance of energy independence for regional businesses. While many industries faced rising fuel and electricity costs, Tatiara Trucks was better protected through its investment in a RedEarth battery.

With lower and more predictable energy costs, the business was able to continue supporting its customers who were already under pressure from higher diesel prices by not adding further costs to repairs and maintenance.

By avoiding a costly grid upgrade, reducing energy costs and securing reliable backup power, Tatiara Trucks has created the energy platform it needs to support the next stage of its growth.

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– Patrick Merrett, Director,
Bordertown Pumps and
Refrigeration

"Having a RedEarth battery meant we could reduce our reliance on grid electricity, demand on the grid and having to pay for an expensive grid upgrade."

– Dylan Jenkin and Jaime Virgin,
Owners, Tatiara Trucks and
Trailers

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