



## ZCell installation at Yallalong Station

### OVERVIEW

- Location - Yallalong Station, Murchison, Western Australia
- 4 x ZCell zinc-bromine flow batteries - 40kWh stored energy
- Custom-built 9.5kW PV array
- 15kVA Victron Quattro Inverter
- 2 x Victron 250/100 MPPT Solar Chargers
- Victron CCGX (Colour Controller)
- 3kW refurbished wind turbine
- At least \$10,000 PA saving in diesel costs



In late 2019, Renewable Battery Storage Solutions (RBSS) and TIEC Electrical designed and installed an energy storage system at Yallalong Station, a 348,000ha cattle station 650km north of Perth in Western Australia.

The cattle station, in the dry Murchison region north east of Geraldton, can swelter in +40°C temperatures in summer - sometimes as high as 48°C.

Yallalong Station owner Lyndon Brown wanted a 24-hour power supply for fridges, air-conditioning and other comforts of life, that are essential to attracting staff to work at the remote location.

RBSS and TIEC installed 4 x Redflow ZCell zinc-bromine flow batteries and a 15kVA Victron Quattro inverter to manage, store and distribute energy from a 9.5 kilowatt/peak solar array. A three seasonal position solar panel frame was also custom-built for the station. The final system, which can store as much as 40 kilowatt-hours (kWh) of energy, enables the Yallalong Station to operate completely off-grid.

As well as providing a 24-hour power supply the new battery system, including a 3kW/peak wind turbine, will save the station at least \$10,000 a year in diesel fuel, transport, logistics and maintenance costs.

# ZCell installation at Yallalong Station

RBSS / TIEC Electrical chose the zinc-bromine flow battery technology and have partnered with Redflow to offer the future in off-grid battery storage power stations.

At RBSS we know that regional clients need a product that will last, reduces the stress of managing a battery storage system in tough, hard conditions, and avoids the need to replace batteries for a very long time.

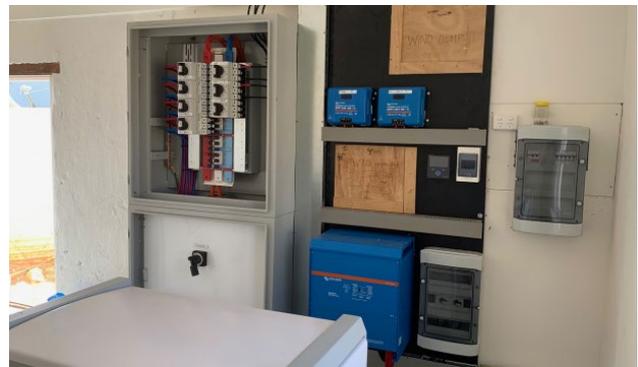
**For more details about this installation contact -  
Leith Elsegood on 0419 948 098  
or email [rbss@tiec.com.au](mailto:rbss@tiec.com.au)**



Connecting the batteries.



The custom-built 3 seasonal position frames for PV panels takes up an area where a previous solar array stood. A refurbished wind turbine will also feed into the system.



Custom-built high-current DC Panel Board utilising circuit breaker in lieu of fuses. Being in a remote region, it's easier to reset a circuit breaker than a high-current fuse in the event a minor fault or excessive load.



Old diesel generator - now used for backup.



ZCell batteries and DC Panel Board in refurbished room.

Completion of the upgraded electrical Distribution Switch-board in existing generator room. New electrical submains and control cables were installed from the new power room main switchboard to the old existing generator room 50m away. This was required to enable auto control start and monitoring of the existing generator. TIEC Electrical were able to design and install a control system to work with client's existing generator to help save costs.



**Renewable Battery Storage Solutions (RBSS)** provide specialist electrical contractor services for the design and installation of sustainable energy storage systems. Ideal for those wanting to complement existing or new solar power installations at home and the work-place, or as an energy backup solution using existing power grid.

RBSS offer services for a wide range of residential and commercial energy storage applications across the Perth metro area and regional Western Australia.



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