



## CASE STUDY >

# SYNERGY – EPC VIRTUAL POWER PLANTS FOR SCHOOLS (VPP4S)

## PROJECT OVERVIEW

Baldja, a majority indigenous owned Incorporated Joint Venture between RSGx, Kardan Construction and Wilco Electrical, was selected to complete works at two schools in Western Australia. The project was for the design, supply, installation and commissioning of a Battery Energy Storage System (BESS) at the selected schools and tie-in of existing solar capacity to the BESS system.

## SCOPE OF WORK

Baldja completed design, council approvals, installation, Western Power connection and commissioning of the BESS systems at the two schools. The schools' BESS specifications and works were completed:

- ♦ Coastal Lakes College – 116kVA / 464kWh BESS with existing 410 kVA Solar PV
- ♦ Success Primary School – 116 kVA / 464 kWh BESS with existing 410kVA Solar PV
- ♦ Both schools required:
  - ♦ Electrical and civil design works expanding on the original SLD and concept sketches from Worley.
  - ♦ Civil works and pouring of slabs for battery units and switchboards.
  - ♦ Tie-in with existing school solar network for communications with the BESS via fibre network or line of sight wireless networking.
  - ♦ Connection to Site Main Switchboard (SMSB).
  - ♦ Control and Communications systems, including SCADA and Protection and all site operational telephony and Internet.
  - ♦ Integration of BESS panel with existing protection relays at the SMSB.
  - ♦ Installation and commissioning of Tesla inverter and Powerpack units with the support of the remote Tesla commissioning team.
  - ♦ Installation of acoustic enclosure for security and noise reduction during operation.
  - ♦ Support of Auto Grid communication interface commissioning with the Synergy team.

## SOLUTION

The design was refined and construction works were completed within the required timeframe, ensuring the required dates between Synergy and the schools were met, through the combined efforts of the Baldja team.

## ACHIEVEMENTS TO DATE

The team successfully completed works at both schools working closely with Tesla, Synergy and the schools to deliver a complex design and construct project with our well integrated teams. All works were completed incident and injury free with all parties satisfied with a well-executed project.

### CLIENT

**SYNERGY**

### SERVICES PROVIDED

**EPC**

**COMMISSIONING**

**ELECTRICAL & INSTRUMENTATION**

### SCOPE

**DETAILED DESIGN**

**CONSTRUCTION**

**PRE-COMMISSIONING**

**COMPLETIONS**

### INDUSTRY

**RENEWABLES**

### LOCATION

**PERTH, WESTERN AUSTRALIA**

