

Tony Ireland Stadium Grid Coupled Solar Energy Storage System

Project Location: Townsville, Queensland, Australia

Client: Townsville City Council

Status: Ongoing

Project Objectives

Implemented a large-scale grid-coupled energy storage system to provide peak load management and emergency power supply for the Tony Ireland Stadium – the Townsville City Council Disaster Response Centre. The system charges from a solar PV system during the day and discharges during the evening to provide peak load management for the stadium. The system also provides up to 5 days of emergency power to support emergency management personnel during disaster response events.

Services Provided

Solari Energy was engaged in an Owner's Engineer role by the Townsville City Council to provide project management, engineering design, power and energy load flow modeling, CAD documentation, tender preparation and management as well as witness testing and commissioning for a 30 kVA grid coupled backup power system with 600 kWh of energy storage. The system uses six SMA Sunny Backup inverters and 96 VRLA battery cells to provide backup power for Townsville City Council's disaster response centre. The system also operates every evening to offset energy consumption during peak times, with energy from a 40 kW solar PV system integrated into the site.

Liaison with the Supply Authority for grid connection and protection requirements was a critical component for the project, as this type of system had never previously been connected. Solari Energy also supplied electrical equipment and materials for the project as well as providing on-site commissioning and fault rectification assistance during construction. Training in the operation and maintenance of the system was provided to local electrical workers and Townsville City Council operations and maintenance staff.

