Case Study

DC Power at Melbourne Airport

Project Snapshot

A specialist Australian EPC contractor engaged Century Yuasa Batteries to support Melbourne Airport's Gas Emission Reduction Program through critical substation DC power system upgrades. The scope required a highly reliable 24V DC power system capable of delivering up to eight hours of backup for safety-critical infrastructure, including runway and terminal emergency lighting, air traffic control systems and emergency communications networks.

Given the operational and regulatory importance of these assets, the solution was required to meet Australian Standards, support long-term reliability and be delivered within a compressed project timeframe. The EPC selected Intelepower following prior successful maintenance and rectifier repair works on an existing third-party DC system onsite.

Solutions Delivered

An Australian-engineered Intelepower 24V DC power system was supplied to meet the performance, compliance and reliability requirements of a major airport environment.

- **24V DC charger and rectifier system** engineered for extended standby operation
- **Yuasa FXH100 VRLA batteries** selected for long design life and reliability
- **Dual X and Y DC architecture** for redundancy and resilience
- **Single-cabinet configuration** with natural ventilation for substation integration
- **End-to-end delivery**, from engineering and manufacture through to commissioning

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Trusted Power. Unmatched Reliability.

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Project Detail

Following engagement, Century Yuasa Batteries issued engineered designs, quotations and a confirmed production schedule within days. The Intelepower DC power system was designed and manufactured at the Carole Park production facility and delivered to the EPC contractor's secure facility prior to site deployment.

The system comprised dual 24V X and Y DC configurations engineered for redundancy and fault tolerance, underwent eight-hour discharge testing under controlled load conditions and was fully commissioned in accordance with Intelepower procedures and applicable Australian regulatory requirements. Comprehensive handover documentation verified system capacity, compliance and long-term serviceability for a safety-critical airport environment.

Outcomes & Benefits

The Intelepower DC power system was delivered and commissioned on schedule, meeting all performance, safety and compliance requirements.

Key outcomes included:

- **On-time delivery:** Design, manufacture, testing and commissioning completed without delay
- **Regulatory compliance:** Aligned with Australian Standards and project specifications
- **Australian-engineered solution:** Local engineering enabled greater control over configuration, testing and lifecycle support
- **High reliability:** Yuasa FXH100 VRLA batteries provide dependable eight-hour backup for critical infrastructure
- **Operational resilience:** Redundant DC architecture supports continuous protection, control and communications
- **Sustainability support:** Improved system efficiency contributes to reduced emissions and long-term asset performance

The successful delivery reinforced confidence in Century Yuasa Batteries' technical capability and supported further engagement, including future substation upgrades and replacement of high-maintenance NiCd systems with Yuasa VRLA technologies.