



Battery Optimisation

Turning Battery Storage into a Revenue-Generating Asset

Installing a battery is only the first step. The real value comes from how intelligently it is controlled.

Oztron's Battery Optimisation Platform continuously analyses site conditions, electricity prices, battery state of charge, solar generation, load demand and market opportunities to maximise the commercial value of battery energy storage systems (BESS).

Whether the objective is reducing electricity costs, increasing solar self-consumption, participating in demand response programmes or preparing for future Virtual Power Plant (VPP) participation, Oztron provides the intelligence layer that transforms a battery from a passive storage device into an actively managed energy asset.

Beyond Simple Charge and Discharge

Most battery systems operate using fixed schedules or basic self-consumption logic. While effective for simple applications, these approaches often fail to capture the full value available in today's electricity markets.

Oztron's optimisation engine continuously evaluates multiple operating objectives, including:

- Solar self-consumption optimisation
- Peak demand reduction
- Energy arbitrage
- Capacity charge reduction
- Demand response participation
- Virtual Power Plant (VPP) integration
- Microgrid support and resilience
- Backup power readiness

The system dynamically prioritises the most valuable operating mode while ensuring customer requirements and battery health constraints are maintained.



Designed for the Western Australian Market

The Western Australian Wholesale Electricity Market (WEM) now operates on 5-minute dispatch and settlement intervals. Significant value can arise from responding to short-duration market events, network constraints and retailer pricing signals.

Oztron's platform has been specifically developed for WA conditions and supports:

- Real-time market-aware battery dispatch
- 5-minute optimisation strategies
- Retailer and aggregator integration
- Demand Side Programme (DSP) participation
- Reserve Capacity Charge (IRCR) reduction strategies
- Future integration with Reserve Capacity Mechanism (RCM) and other market services

This allows commercial and industrial customers to capture opportunities that are often inaccessible using standard inverter-based control systems.

Intelligent Energy Management

At the heart of the platform is Oztron's optimization engine **OztronBEAMS**, which continuously monitors:

- Site electricity demand
- Solar PV generation
- Battery availability and state of charge
- Import and export limits
- Electricity tariffs and market signals
- Forecast weather and operating conditions

Using this information, BEAMS determines the optimum charging and discharging strategy while respecting operational constraints and maintaining sufficient energy reserves where required. Advanced algorithms ensure that battery cycling generates genuine economic value while minimising unnecessary battery wear.



Vendor-Neutral Architecture

Oztron's optimisation platform is designed to operate with a wide range of battery and inverter technologies.

The system integrates with:

- Battery Energy Storage Systems (BESS)
- Solar PV inverters
- Site metering systems
- Building Management Systems (BMS)
- SCADA systems
- Aggregator and VPP platforms

This vendor-neutral approach allows customers to retain flexibility and avoid being locked into a single equipment supplier. The platform can be deployed on new installations or retrofitted to existing battery systems.

Ready for Virtual Power Plants and Aggregation

As electricity markets evolve, distributed batteries are increasingly being aggregated into Virtual Power Plants and demand response portfolios.

Oztron's control architecture has been developed to support future participation through retailers, aggregators and market operators. The platform provides secure communications, telemetry, dispatch execution, audit trails and performance reporting required for commercial-scale participation.

Why Oztron?

Oztron combines advanced software with practical power systems engineering.

Unlike generic energy management platforms, our solution is designed by engineers with extensive experience in battery systems, microgrids, utility integration and the Western Australian electricity market.

The result is a battery optimisation platform that delivers measurable operational savings today while creating a pathway to future market participation opportunities.

Your battery is an investment. Oztron helps ensure it delivers its full value.