

CASE STUDY

Seamless, high efficiency off-grid ESS solution

Sydney, Australia
Concrete Batching Plant



Introduction & Project Information

- **Project location:** Sydney NSW, Australia
- **Project type:** Concrete Batching Plant
- **Delivery date:** Nov 2024
- **Loads:** 1 Concrete batching plant
- **Enertainer Model:** 1 x Enertainer M
- **Input current to the Enertainer:** 70 amps

Site Setup



Figure 1. With 70 amps recharging from a 100kVA generator.

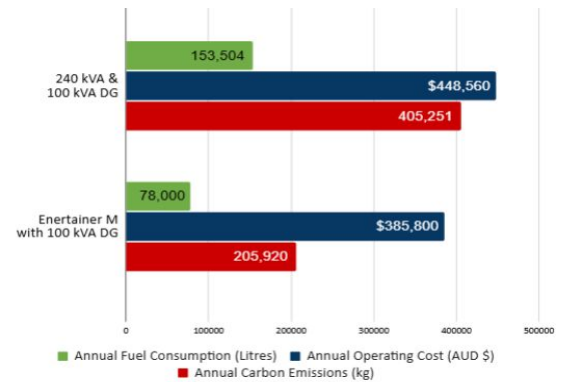


Figure 2. Annual carbon emissions, operating cost & fuel consumption

Results

The Ampd Enertainer, an advanced and connected battery energy storage system (ESS), was deployed to reduce the reliance on a 240 kVA Genset for powering an off-grid mobile concrete batching plant. Instead of running continuously, a smaller 100 kVA Genset was used solely to recharge the Enertainer, which efficiently managed power distribution with automated start-stop functionality. This approach resulted in a 49% reduction in CO₂ emissions and fuel consumption and a 14% reduction in operational costs while ensuring a seamless power supply. The project highlights how industries can transition towards cleaner energy solutions by integrating advanced battery storage, optimizing efficiency, and minimizing environmental impact.

- 199 tonne CO₂ reduction (49% reduction) per year¹
- 75,000 L of fuel saved (49% reduction) in a year¹
- AUD \$50,500 yearly savings (14% reduction) in operating cost^{2,3}

¹ Assuming a CO₂ emission intensity of 2.64 kg per litre.

² Assuming a diesel price of AUD\$2.1 per litre.

³ Fuel consumption and rental costs of both Enertainer and Diesel Generators were provided by the customer.

