

CASE STUDY

ESS for The Grove - Mixed Use Development Project

Substructure & Superstructure Works,
Abu Dhabi, UAE



Introduction & Project Information

- **Project location:** Abu Dhabi, UAE
- **Project type:** Construction of substructure & superstructure works
- **Developer:** Aldar Properties PJSC
- **Delivery date:** Nov 2024
- **Loads:** 2 Tower cranes & constant load from construction tools
- **Enertainer Model:** Enertainer L+
- **Input current to the Enertainer:** 80 amps

Site Setup

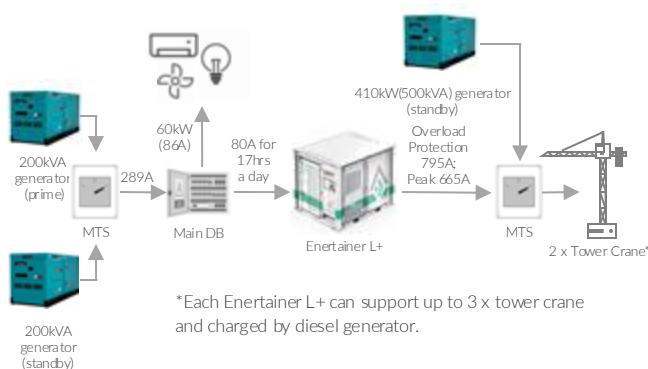


Figure 1. 'Block' diagram of the connection between the Diesel Generators, Enertainer and the loads

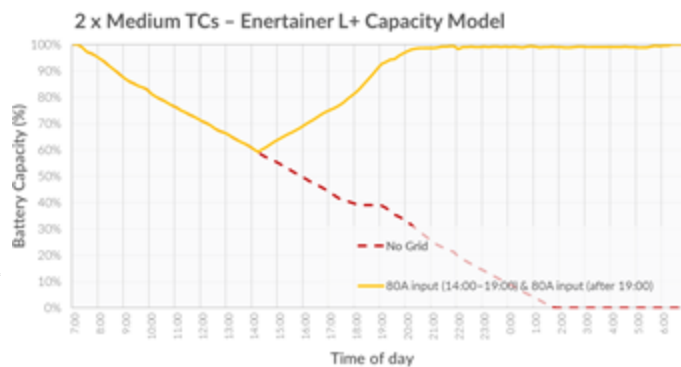


Figure 2. Battery capacity variation throughout the day

Results

"We are proud to partner with Aldar Properties PJSC to utilize our ESS solution to power construction equipment. The system not only eliminated emissions, reduced noise, and lowered operational costs in challenging environments but also aligned seamlessly with Aldar's commitment to creating a greener, more resilient future. This collaboration marks a significant step forward in revolutionizing construction sites with innovative solutions that enhance efficiency, safety, and sustainability."

Rafat Awad – Head of Sales GCC Ampd Energy

- **713 tonnes of CO₂ reduction per year¹ (57% reduction)**
(vs. 2 x 410 kVA generators)
- **22,500 L of fuel saved per month²**
- **AED 726K yearly savings in operating cost³ (54% reduction)**

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

² Assuming a diesel price of AED 2.5 per litre.

³ Fuel consumption and rental costs of both Enertainer and Diesel Generators provided by Aldar Properties PJSC.

