

Battery Energy Storage System

Hybrid drilling for reduced operating costs and a lower environmental footprint



The BENTEC Battery Energy Storage System (BESS) is a modular power management solution designed to help decarbonize your existing operational setup, optimizing asset performance through a reduction in operating costs, whilst taking a sustainable approach to emissions reduction.

What does it do?

A BESS enables rigs to run with fewer engines more efficiently, leading to reduced engine runtime, overall lower diesel consumption and ultimately performing at a lower carbon footprint. It can also address the provision of increasing environmental market regulations.

How does it work?

A BESS containerized system consists of two battery banks, an energy monitoring and control system, power and auxiliary panels and a heating/ventilation and air conditioner (HVAC) system, all designed for the operation in harshest environments. The batteries are charged by the diesel generators in times of low power demand and discharge to support the diesel generators when the rig requires high power (peak shaving).

A BESS setup therefore enables a reduction of a minimum of one diesel generator in all operations.

Designed with expertise

The fully scalable BESS unit provides proven and proprietary technology from a company backed by more than 130 years of drilling rig and oilfield expertise to support your decarbonization journey.



Lower diesel consumption

- ✓ Up to 20% diesel and associated costs

Lower CO₂ emissions

- ✓ Up to 20% CO₂ reduction

Lower operating costs

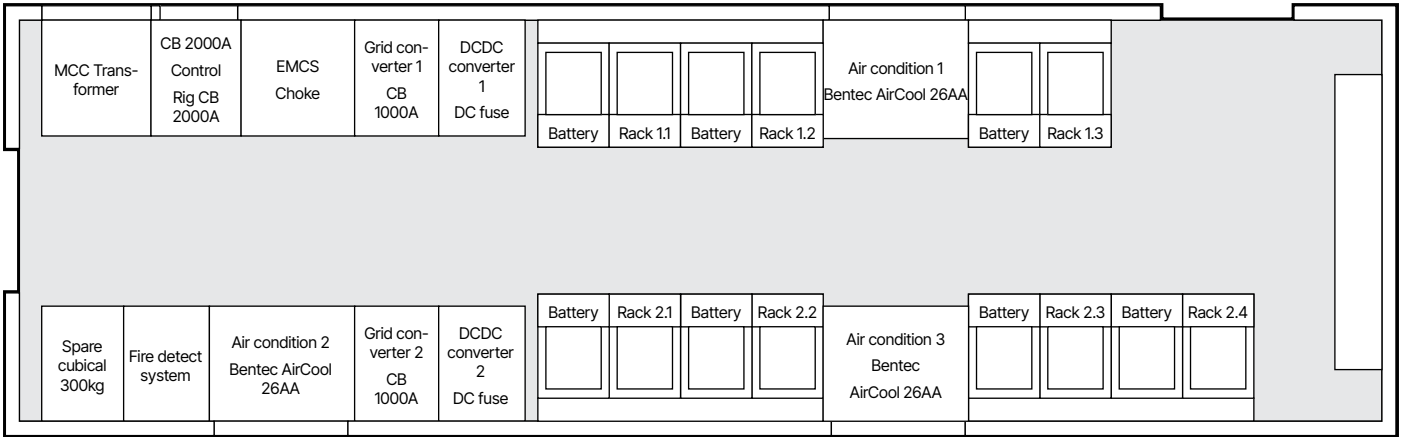
- ✓ Up to 40% reduced generator operating hours and lower maintenance costs

Additional benefits

- ✓ Scalable modular solution
- ✓ Optimize asset performance
- ✓ Transient events and black start capability
- ✓ Available for the harshest environments
- ✓ Fully compliant with global safety standards

Sample Specifications

Can be tailored to your project requirements.



Dimensions	10m x 3m x 3m	Battery capacity	800kWh
Weight	~30t	Maximum power	1400 — 1600kW (2C)
Cell technology	Lithium Iron Phosphate (LFP)	Environmental conditions	Desert: -10 to +55°C Arctic: -45 to +40°C

Features

- Turnkey, walk-in unit (custom build available)
- Tailor made energy management system
- Energy Monitoring & Control System (EMCS) coordinates power sources and remote start/stop of generators
- Various battery technologies available
- Bentec airCOOL HVAC system
- Smoke detection and fire extinguishing system
- 24/7/365 support including remote access (rigCARE™)

Alternative Applications

- Grid balancing
- Industrial scale peak shaving services
- Uninterruptible power supply (UPS)
- Energy trading

Market Sectors

- Oil and gas — on-and-offshore
- Renewables — onshore wind & solar farms
- Industrial/commercial
- Utilities/power generation
- Chemical

Peak Shaving

Peak loads during tripping or drilling are supplied by battery power. Breaking energy recharges the batteries between the peaks.

