

**PIENAAR ENERGY (PTY) LTD**

# **Shore power system equipped with energy storage battery**



## Overview

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This analysis outlines a floating battery energy storage platform - referred to as the power barge - capable of delivering high-capacity shore power to offshore construction vessels. The system includes containerized batteries with a capacity of 75 MWh, a central DC backbone, DC/AC inverter, and. Our mobile battery barges deliver shore power to ships at berth and at anchor, reducing emissions without needing to install expensive fixed connections at every berth. -contained battery solution for large-scale marine energy storage. Without shore power, the vessels would have to use auxiliary engines to generate power. Whether it's a new build or a refit, a hybrid or an all-electric vessel, these battery-based energy storage solutions are helping redefine modern ship propulsion.

## Shore power system equipped with energy storage battery

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### Shore Power to X - PSW Power

The Shore power to X solution also offers emergency power functionality. When equipped with an integrated Battery Energy Storage System (BESS), it can operate as an Uninterruptible Power ...

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## Complete battery storage systems for retrofit and newbuilt ...

According to the joint industry project Hybrid Power, fitting a typical offshore support vessel with energy storage can result in significant reduction in fuel consumption and pollutant emissions, as well as ...



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### Business case for an offshore construction vessel with a shore power

The power barge at the heart of this study is a floating battery energy storage system designed to deliver clean, high-capacity shore power to offshore construction vessels while at berth ...

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## Marine Energy Storage System booklet

Whether it's a new build or a retrofit, a hybrid or an all-electric vessel, these battery-based energy storage solutions are helping redefine modern ship propulsion.

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## ENERGY STORAGE FOR PORT ELECTRIFICATION

Storing energy, particularly in the form of electrical energy which is the form required for shore power and vessel recharging, is expensive. Although lithium-ion batteries are considered to be the 'go-to' ...

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## Flux Lines , Mobile Shore Power Solutions

A modular, barge-based energy storage system that delivers shore power when and where needed, at the center of your port and terminal electrification strategy. Up to 7500 kVA power capacity at ...

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## Energy storage system

ABB's Energy storage system is a modular battery power supply developed for marine use. It is applicable to high

and low voltage, AC and DC power systems, and can be combined with a variety ...

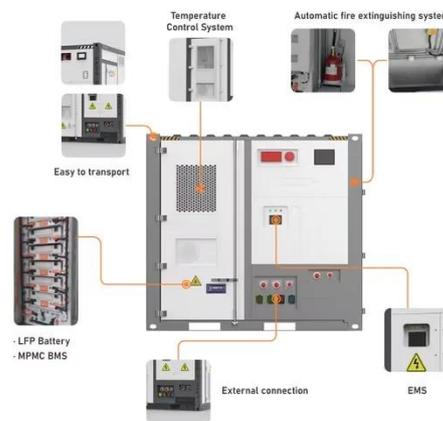
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## CTECHI Marine Energy Storage System 12V 24V 48V LiFePO4 Battery System

With intelligent EMS integration and multiple charging options, this system provides seamless operation and an enjoyable sailing experience without the noise, fumes, or maintenance associated with ...

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## Shore power solutions

A chargeable, on-board energy storage system allows a vessel to operate without running its engines. Using a zero-carbon on-shore power grid for charging means that the vessel can achieve zero ...

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## Marine Battery Energy Storage Systems on Ships , Encyclopedia MDPI

The battery system has a large energy capacity (approx. 1130 kWh), which can not only support the ship in case of extra power needs but also means that the vessel can stay quayside for many hours

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EASY TO TRANSPORT AND INSTALL,  
FLEXIBLE DEPLOYMENT



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