



# Deployed Energy Management System

The Deployed Energy Management System (DEMS) is a power management and microgrid system which manages generators, incorporates energy storage and renewable sources, and manages demands intelligently to optimise system efficiency.

Remote monitoring and control functionality enables systems deployed world-wide to be monitored and run from a central location.

This robust and rapidly deployable system has been deployed and

demonstrated with the UK MOD, typically delivering up to a 35% fuel saving and a 50% reduction in generator maintenance.

DEMS is a modular and scalable plug and play system, compatible with

both defence and commercial power systems. It can be simply configured for a wide range of uses, from a dedicated generator powering a single item to a 500 man camp.

DEMS exploits new technologies to produce a more efficient and reliable powering system for off-grid locations.

The DEMS microgrid integrates with military and commercial generators, scavenging from spare generator capacity to charge batteries then turning off the generator to run the camp silently from the stored energy. Generators run at their most efficient output for a minimum amount of time, reducing generator running hours and so the maintenance burden.

The system meters and intelligently manages the user demands. It ensures supply to critical systems in the event of a generator failure, delivers efficiencies and provides equipment condition data.

A variety of renewable power sources can be incorporated to tailor DEMS for any environment.

The DEMS power management software provides a status screen and a user interface to control the system. DEMS can be accessed remotely to enable monitoring and optimisation of the system, reducing the training burden on locally deployed staff.

### Deployed Energy Management System

A modular, scalable base power solution

- Compatible with defence and commercial generators
- Plug and play with multiple distribution systems
- Simple to retro-fit into existing power architectures
- Successfully demonstrated in operational environments
- Capability components can be acquired as needed.

### Generator Management / Energy Storage

- Generators run at their most efficient output and are then switched off
- Reduces generator hours and fuel consumption
- Three phase or one phase operation
- Backup for critical systems

### Remote Operation

- Secure communications
- Remote system control
- System and performance data transfer.

### Renewables Integration

- Integrates any renewable source, such as photovoltaic or wind
- Renewables can be placed anywhere on power network
- Offers flexibility for siting renewable equipment in challenging locations.

### Demand Management

- Real time load monitoring
- Prioritises power to critical systems
- Load shedding based upon timers delivers efficiencies
- Provides equipment condition data
- Shedding loads to the systems power capacity eliminates generator overloads.



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#### For more information contact:

BAE Systems Maritime Services  
Energy Solutions & Services  
Room 112, Victory Building,  
HMNB Portsmouth, Hampshire,  
PO1 3AQ, United Kingdom

**T:** +44 (0)3300 467983

**E:** kenneth.hobbs@baesystems.com

**W:** www.baesystems.com/maritimeservices

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