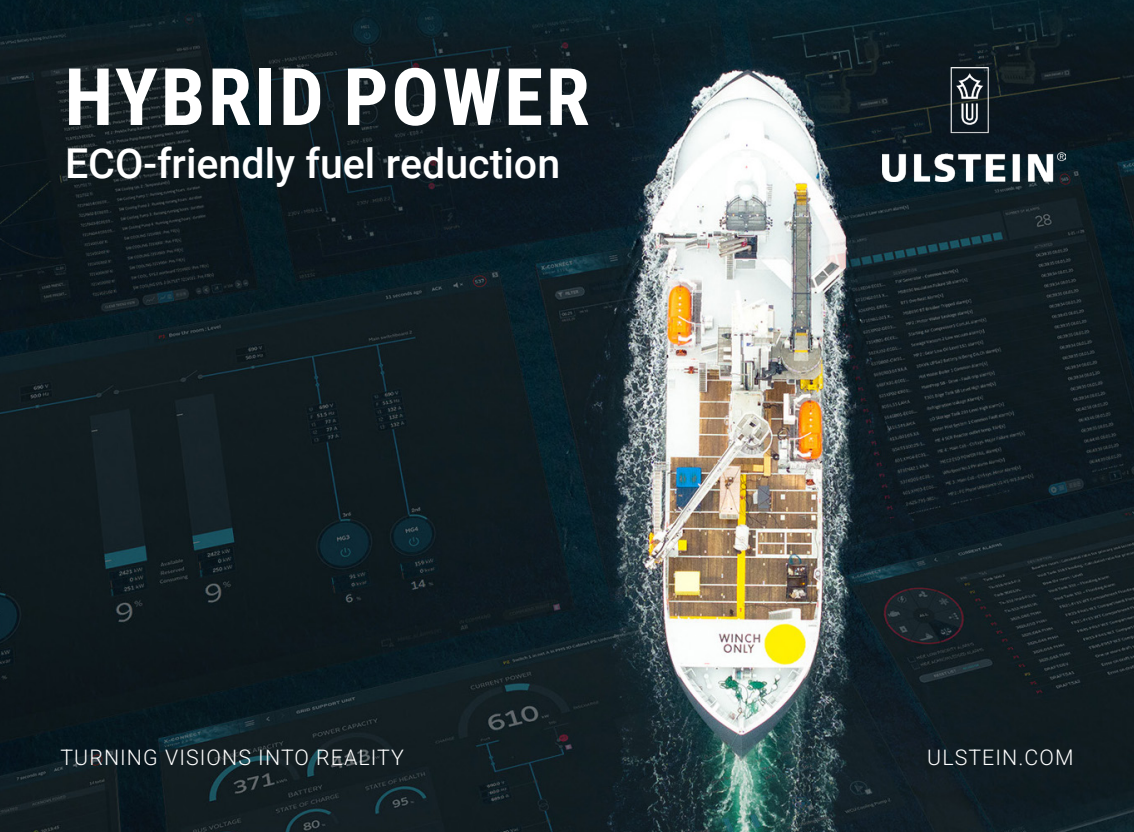
HYBRID POWER

ECO-friendly fuel reduction



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TURNING VISIONS INTO REALITY

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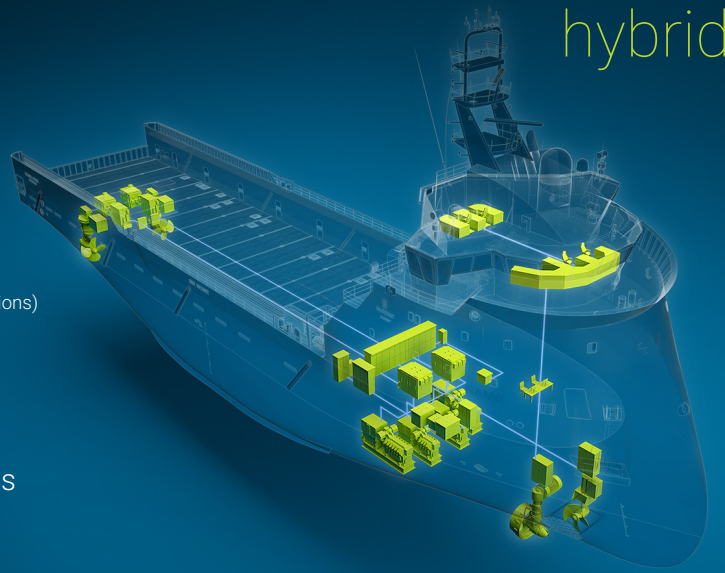
Hybrid power benefits

- Improved energy efficiency
- Reduced fuel consumption
- Reduced emissions (emission-free in some operations)
- Less wear and tear
- Peak shaving for best operational results
- Reduced operational expenditure

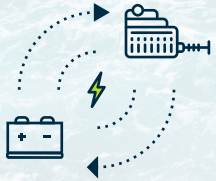


ECO-friendly fuel reduction with hybrid power solutions

Hybrid power solutions reduce fuel consumption and emissions. Depending on setup and operational profile, **CO2 emissions can be significantly reduced.** The hybrid system also allows for **completely emission-free periods**, which makes a great difference in terms of operational expenditure and sustainability.

The Ulstein Hybrid Power Solution introduces a new element into the main power system of the ship, where the added “grid support functions” give new opportunities for flexible vessel operation. The system solution contains battery energy storage, power conversion and energy management as the main elements.

Reduced
Emissions and engine load



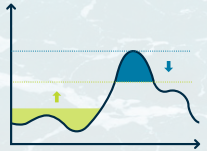
Flexible power generation

Operating within the sweet spot of energy efficiency! With a VSG (variable speed generator), the speed of the combustion engine can be regulated and adjusted to match the load demand of the vessel, increasing the overall efficiency of the power system.

Zero-emission mode

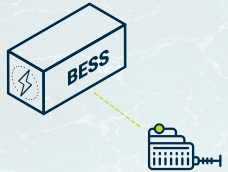
In zero-emission mode, the vessel is powered exclusively by the energy storage system. One major benefit is a cut in local emissions. The zero-emission mode functionality can be scaled from minutes of operation in harbour, to operations of vessels with predictable schedules in terms of activity and energy.

Smart
DP operations



Peak shaving

When power demand fluctuates, combustion engines may not be operating efficiently. With hybrid solutions, this is a problem that is easily avoidable. The hybrid power system increases efficiency, handling the peak loads by smoothing the load of the engines. This process prevents unnecessary start-up of standby engines, improving overall vessel efficiency.



Spinning reserve

For operations requiring redundancy on power supply such as DP operations, more combustion engines need to be running than strictly required to support power demand. In these cases, the hybrid power system can act as a source of spinning reserve energy, enabling the vessel to operate safely with fewer engines running.

The whole process

PROJECT EXECUTION

We can assist you throughout a shipbuilding project. We offer complete follow-up, starting with the design and engineering phases, through to site support, pre-/commissioning and testing prior to delivery, further on to aftermarket services after the vessel has entered operations.

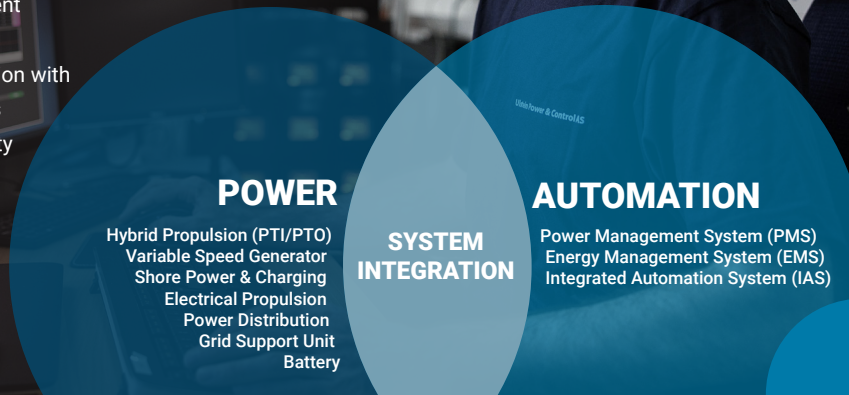
- Planning and set-up
- Retrofit or new vessel installations
- Installation support
- Site support
- Pre-commissioning
- Commissioning
- Services and upgrades

Time to upgrade?

Vessel owners need to adopt new technology to protect their operations in the digital age. Older automation systems are reaching the end of their life, increasing the chances of component failure and downtime. Upgrading these systems is a wise choice to ensure smooth operations.

Benefits of upgrading

- Extend component lifespan
- Simplify interaction with modern systems
- Ensure availability of spare parts
- Flexible solutions for new demands



VISION

We create tomorrow's solutions for sustainable marine operations

SOLUTIONS

Scalable high end Marine Power and automation solutions

VALUES

Innovate, Engage and Advance

LOCATION

Ulsteinvik, Norway

EMPLOYEES

Employees with long experience within automation and electrical solutions

REFERENCES

Energy, Adventure, Seafood

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