Hvordan kan dagens batteriteknologi bidra til å løse utfordringene vi har med utslipp fra store skip?

Halvard Hauso
CCO Corvus Energy
Supplier of ESS
- Founded in 2009
- HQ in Norway
- 170+ employees
- Privately held ownership

The Team
- Superior battery knowledge
- Strong maritime DNA
- Extensive global network in the maritime industry

Quality and Risk
- ISO 9001 certified
- ISO 14001 certified
- Extensive project risk mitigation

About Corvus Energy
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260 Projects

>2 000 000 operating hours

230 MWh

76 Car and Passenger ferries

18 Cruise and Yachts

48 Offshore and Subsea

26 Tugs/Workboat/Fishing

14 Merchant vessels

85+ Port equipment and Shore stations
Designed for specific use cases

- Spinning Reserve
- Peak Shaving
- Enhanced Dynamic Performance
- Enhanced Ride Through
- Strategic Loading
- Zero Emission Operations

Safety standards

Exceeds all class and national requirements:

1. Single Cell passive thermal insulation
2. Separate gas venting system
Emissions from shipping

Shipping emits around 1000 million Tons CO2 Annually –

Equals almost 3% of the global greenhouse gas emission

Are predicted to increase between 50 and 250% - depending on future economic and energy developments

In addition comes

Ballast water discharges impact on marine environment

Sound Pollution potential threat to wild life.
How can Energy Storage help reduce CO2 emissions?

Ships’ energy consumption and CO2 emissions can be reduced by up to 75% by applying operational measures and implementing existing technologies (source IMO) – Energy storage is an important part of this.
Energy density versus volume

For ships – volumetric energy density is in general most important

Source: DNVGL Low Carbon Shipping towards 2050
Corvus Energy product portfolio

Usage/Applications adapted to vessel type

- Offshore/Rig Topside: Re-generation of energy
  - Corvus Blue Marlin
- OSVs Ferries Port Cranes
  - Corvus Orca Energy
- Light weight/High speed vessels
  - Corvus Dolphin Power
- Subsea Re-generation of energy
  - Corvus Moray Power
- Light weight/Long charge/discharge
  - Corvus Dolphin Energy
- Subsea energybank - slow discharge
  - Corvus Moray Energy
- Cruise/Ro-pax/Ro-Ro Slow charge - Discharge
  - Corvus Blue Whale

Performance needs

High Power

High Energy
New battery for Cruise, Ro-Ro and Ro-Pax

- Large capacity ESS – 10-50MWh+
- Slow charge and discharge rate
- Suitable for newbuilds and retrofit projects
ESS development 2009 to present

Corvus AT 6500

2016

Corvus Orca Energy

2019

Corvus Blue Whale

Corvus AT 6500

Footprint

50%

Volume

50%

Weight

30%

Corvus Orca Energy

Footprint

50%

Volume

50%

Weight

30%

Corvus Blue Whale

Footprint

50%

Volume

50%

Weight

30%
Choose Insert > Header & Footer > Footer to change this.
Cruise Vessels

Container Vessels

Car and Truck Carriers

Evolving segments - large hybrid vessels
Tusen takk!