Keeping our waterways clean is important to the health and survival of our planet. BAE Systems is leading the way with its clean, quiet, alternative propulsion systems. With more than 10,000 electric drive systems in service worldwide, BAE Systems’ electric hybrid, battery electric, and fuel cell electric systems are now getting marine vessels to zero emissions.
HybriGen® power and propulsion

HybriGen® power and propulsion systems are proven, in service with vessel operators in various markets, including passenger and cargo transportation. Our packaged solutions provide both efficient electric propulsion as well as electric auxiliary power for a vessel using on-demand technology. HybriGen patented technology uses a diesel engine and lithium-ion batteries to provide nearly silent, vibration-free electric propulsion increasing operator and passenger experience.

How it works:
Using our variable speed generator we create electricity for auxiliary vessel power and electric propulsion. Generated power is distributed efficiently throughout the system either to the AC Traction Motor (ACTM) for propulsive loads, APS for auxiliary power or to the Energy Storage System (ESS) for storage which can then be called upon for full electric operation. Our system is smart enough to operate in the most efficient way without the need for constant mode selection from the captain and ensure maximum operational efficiencies.

Electric hybrid solutions:
- Our modular, scalable system is an integrated power solution combining electric generation, with a range of energy storage options for distribution into one compact and unified system
- The Energy Storage System (ESS) is selected based on analysis to ensure an optimal solution for specific needs
- Independent serial hybrid propulsion systems provide complete redundancy for the vessel
- Simple yet powerful system controls for vessel operation and monitoring
- Variable speed genset and lithium-ion battery storage and efficient system operation reduces under loading of the marine diesel which saves fuel
- With the decreased operation of the marine diesel, maintenance is greatly reduced

Zero emission solutions: Battery or Fuel Cell Electric
- Fuel cell powered electric propulsion is available with our same proven HybriGen architecture
- Hydrogen is the sole fuel source in our fuel cell electric option and pure water is its only exhaust
- HybriGen is flexible to accommodate additional batteries as desired for increased electric operation, without requiring a change in hardware

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