



Case Study: Emery Electric

OutBack Marine Power System Installation



Overview

Since 1996, 80-year-old Emery Electric has provided maintenance, repair and engineering upgrades to Royal Canadian Navy vessels docked at its base in Victoria, British Columbia, on Canada's Western coast. In 2006, the company began servicing the Navy's eight Orca vessels. Primarily used for training, these boats prepare naval officers for at-sea service. Orca boats are also used to train non-commissioned sailors, as well as provide sea-going experiences for members of the Royal Canadian Sea Cadets.

Because the Orca vessels are an integral part of the Royal Canadian Navy's training program, **it is essential that their power sources be water resistant, durable and reliable.** The Navy turned to Emery Electric to ensure that the power conversion systems onboard the Orcas and other vessels met those requirements. Emery Electric consequently turned to OutBack Power for the solution.



Navy and auxiliary vessel crews take great pride in their vessels, and there has been some jockeying over which boat will get the next OutBack Power installation. OutBack's systems are smaller, more durable, more user-friendly and more reliable than the competition's. Their performance onboard Royal Canadian Navy vessels has been the best I've seen."

Guy Barrett

Defense Programs Manager, Emery Electric

System Specifications

Location: Victoria, British Columbia

System Power: 22.6kW in 9 Configurations

System Components: FX Inverter/Charger and MATE3 System Display and Controller





Objectives

- Select a power management inverter/charger with sufficient output and a small enough footprint to work within the space and weight restrictions of the *Orca* vessels
- Ensure ease of installation with an inverter/charger that can be mounted without difficulty
- Eliminate worry with an inverter/charger that can be preprogrammed to require no additional attention from the crew, and that can resist seawater that might enter vessel machinery rooms



Solution

Each of the eight *Orca* vessels was fitted with nine OutBack Power sealed FX inverter/chargers and a MATE3 controller. Specially designed to survive in environments that would destroy other inverter/chargers, FX inverters have a die-cast aluminum chassis with a powder-coated finish to prevent corrosion and gaskets and o-ring seals on seams and openings to keep seawater out. The compact OutBack Power inverter/chargers are used as standalone battery chargers in *Orca* engine rooms for onboard diesel generators. The inverters power critical 120V electrical components that perform tasks such as steering, navigation and fire pump hauling. The MATE3 controller makes maintenance easy by providing compact displays of the complete power system and allowing remote system configuration. After seeing the performance of the FX series inverter/chargers in action onboard the *Orca* boats, Emery Electric began using OutBack products to replace the charging systems and inverters on many of the Navy's support vessels, including fireboats, tugboats and barges.

Benefits

- OutBack Power inverter/chargers mount easily on bulkhead walls and occupy minimal space onboard cramped Navy vessels
- Versatile FX inverter/chargers can serve in multiple roles, including power conversion and battery charging
- FX inverter/charger reliability reduces maintenance costs and helps eliminate downtime
- The OutBack Power MATE3 controller delivers remote power management and monitoring capabilities for easy troubleshooting