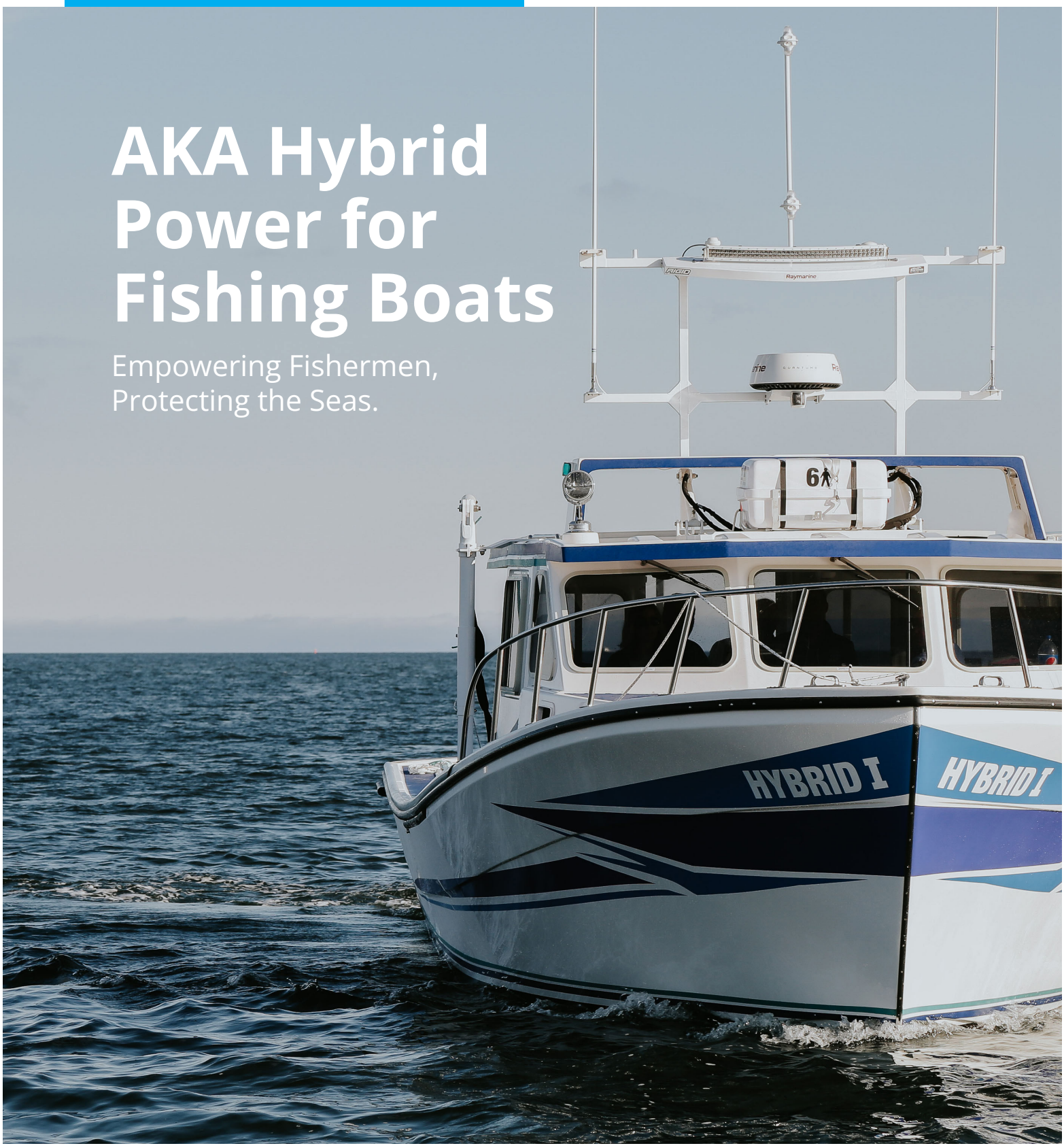
AKA Hybrid Power for Fishing Boats

Empowering Fishermen,
Protecting the Seas.



Ahead of the Current

AKA Energy Systems

AKA'S HYBRID POWER CUSTOMIZED FOR YOUR FISHING VESSEL

AKA's engineering team underwent an in-depth design phase working closely with fishermen to understand the fishing community and their specific needs. Our hybrid fishing boat has completed its sea trials and AKA collected valuable data through this to fully understand the power requirements of lobster fishing. Our data-driven hybrid system is designed to meet the industry's needs while enabling significant fuel, emission, and noise reduction.

The AKA Hybrid Fishing boat's power and propulsion system consists of two different sources that supply power to the propeller, an electric motor, and a Diesel engine coupled to the shaft.

AKA's hybrid design allows you to configure your engine based on your current activity, for example, sailing or fishing. Allowing the vessel, the flexibility to operate at different loads increases its efficiency. This works well for fishermen, as most of the time is spent operating at a lower load. Traditional propulsion system designs do not take this into account and therefore create excess power when not needed.

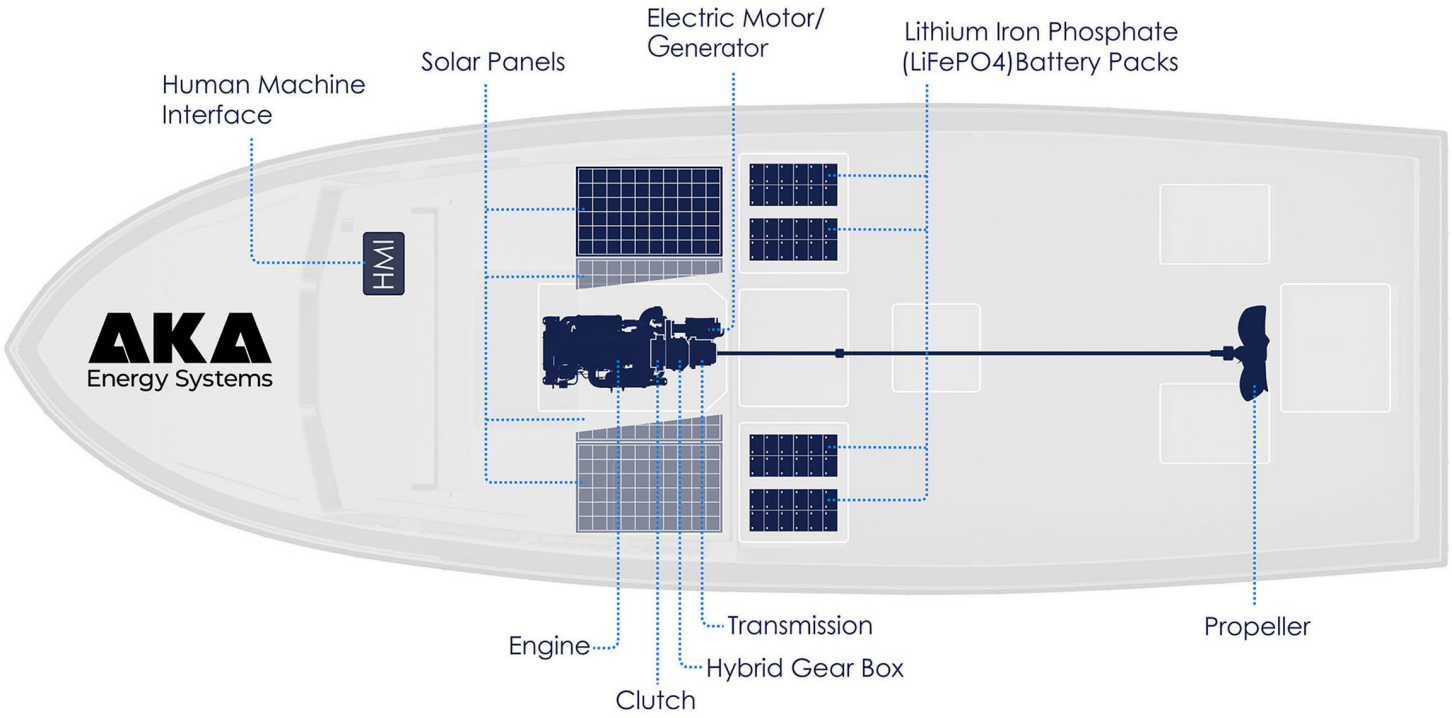
Modes of Operation

Diesel
In diesel-only mode, the boat operates exclusively with its diesel engine, primarily intended for conventional sailing and fishing activities. However, it's important to note that this mode generates emissions during its operation, a consideration when balancing performance with environmental impact.

Hybrid (Diesel-Electric)
In hybrid mode, the boat's power system offers remarkable flexibility by allowing the Diesel engine and electric motor to run independently or together, optimizing performance and fuel efficiency. The electric motor can assist the Diesel engine as needed, and the Diesel's running time recharges the electric motor, reducing environmental impact. The boat's hydraulics operate normally in this advanced power mode.

Electric
In electric mode, the boat operates emission-free, offering an eco-friendly solution for fishermen. This mode not only reduces environmental impact but also enhances versatility for fishermen dealing with daily challenges. The electric motor's unique capability to act as a generator (PMG) during diesel engine use converts sailing time into charge time, reducing engine running hours and extending its lifespan. To boost sustainability, the electric motor can be charged through shore power and solar trickle charging. Throughout, the boat's hydraulics function normally, ensuring seamless operation, and is most efficient while fishing.

AKA's hybrid system for fishing boats completed sea trials making it a data-driven design tailored to reduce emissions and increase savings while adding a secondary power source and generator at sea.



About the Hybrid System

AKA's hybrid drive system allows two different ways to power the propeller - an electric motor and a diesel engine coupled to the shaft. While the source of power for the electric motor is a high-capacity Lithium (LiFePO4) battery consisting of eight battery modules.

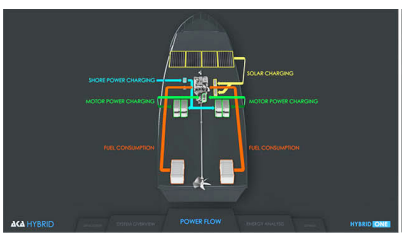
Features:

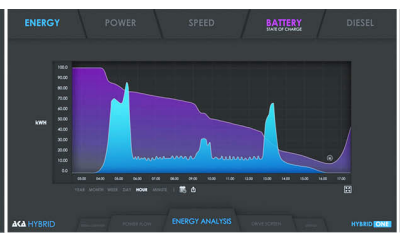
- Three Charging Modes:
  - via diesel engine (Electric motor works as a generator),
  - via shore power and onboard charger, or
  - via solar power.
- Several Operation Modes (Diesel only, Electric only, and Hybrid mode)
- Additional 24V Lead Acid battery providing power for diesel starter and control power for navigation equipment, radio, lights etc.
  - Integrated Power Management System and Battery Management System provides thorough visual information, including alarming and pre-alarming states.

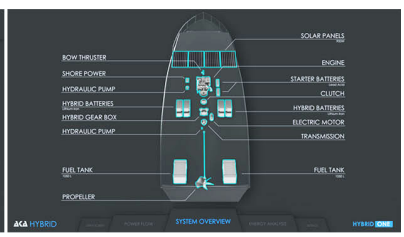
Why go Hybrid?

- Safe operation
- Significant emission reduction
- Reliability - two power sources are better than one
- Flexible operating modes
- Reduced maintenance costs
- Reduced fuel consumption
- Increased engine longevity

Providing you with flexible power configurations and battery backup, our cutting-edge technology will take you home.







AKA Energy Systems

AKA Energy Systems (Aspin Kemp & Associates Inc.) is an energy systems provider delivering innovative solutions to island and microgrid power systems. AKA designs, manufactures, and supports power and propulsion assets for marine, Offshore O&G, and land-based industries. AKA has shifted the paradigm for fuel efficiency and reliability in offshore drilling with proven fuel savings of over 50% and similar results in marine and land-based microgrids.

AKA offers a full spectrum of integrated products and services including systems integration, new product development, engineering, manufacturing, testing, installation, commissioning, life cycle support, field services, integrated documentation, and training. AKA's manufacturing facility in Prince Edward Island, Canada includes a state-of-the-art mechanical fabrication shop, an electrical assembly area, and a medium voltage test bay. AKA's global clients and partners also include MAN Energy Solutions, Transocean, Shell, GE Energy, Siemens, Eaton, Schneider Electric, and many more.

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