

Bear Mountain Hybrid 30

"SPARKS" Power System

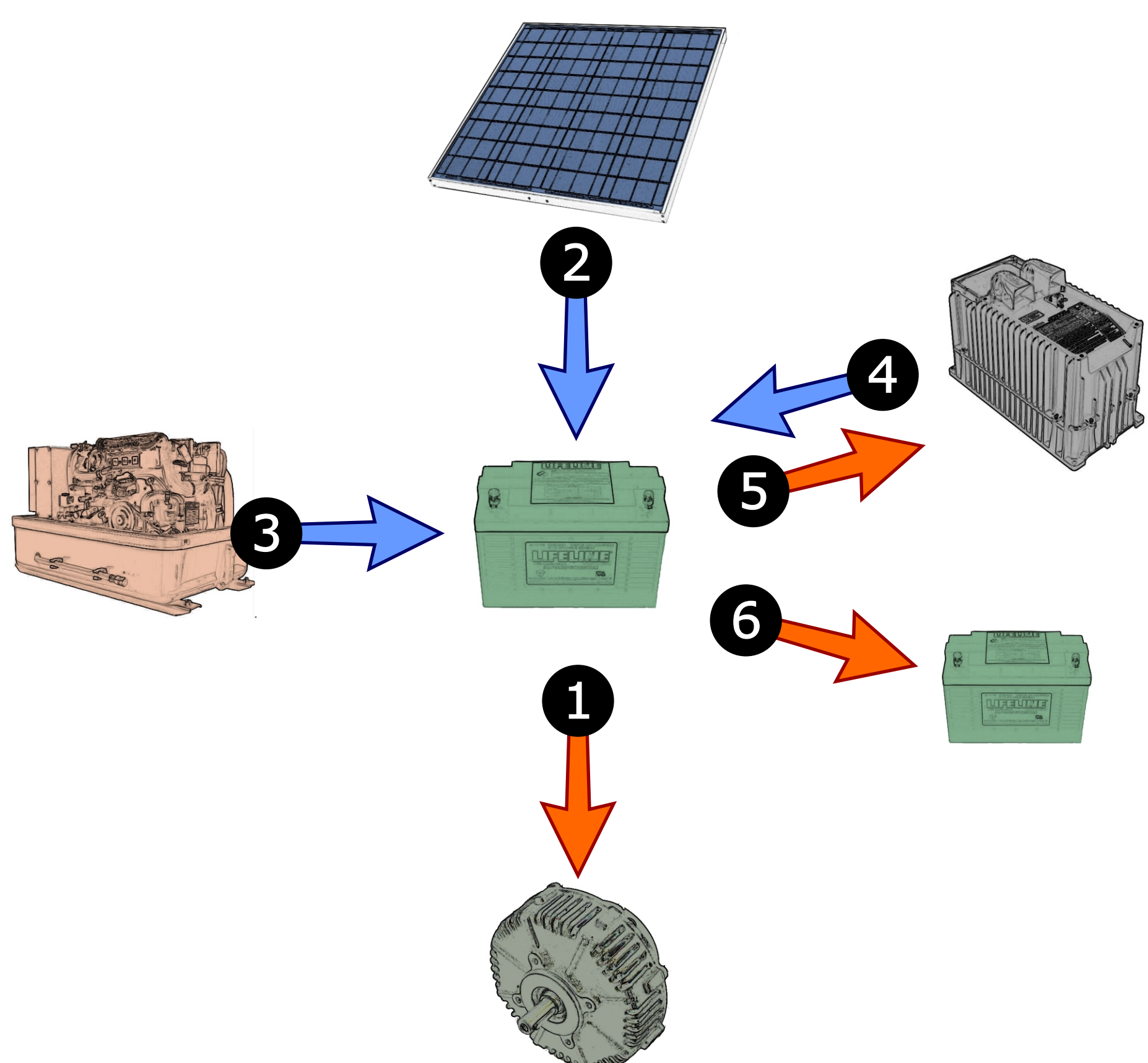
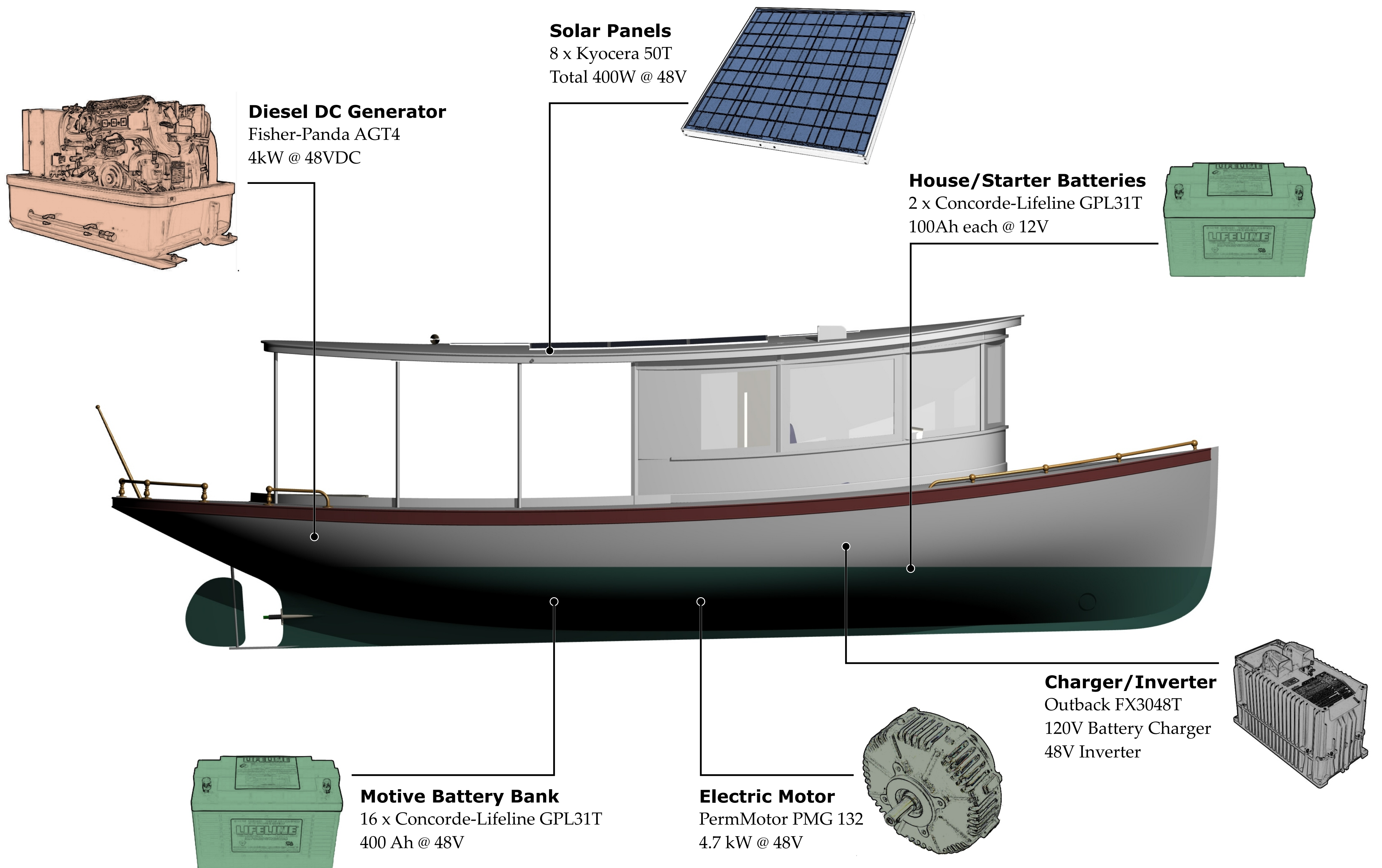
How It Works

"Sparks" is a solar/diesel hybrid boat. The propeller is driven by an electric motor which draws power from 16 12V batteries. These batteries are recharged by the solar panels or by the diesel generator when required.

A computerized monitoring system shows the operator the amount of power being delivered or consumed by each part of the boat.

Statistics

| | |
|-----------------------------------|---------------|
| Launch Date | June 22, 2010 |
| Length | 30' 3" |
| Beam | 6' 11" |
| Draft | 2' 0" |
| Displacement | 6800 lbs. |
| Top Speed | 6.5 knots |
| Cruise Speed | 4.5 knots |
| Run Time at Cruise (Battery Only) | 4.0 hours |



Power Flow

- 1 The main motive battery bank provides power to the electric motor
- 2 Whenever the sun is shining, the solar panels recharge the battery bank
- 3 If the batteries fall below a pre-set limit, the generator starts and recharges the battery bank
- 4 Where available, the charger can be connected to shore power to recharge the battery bank
- 5 The inverter provides 120VAC from the 48VDC battery while away from the dock
- 6 Two 12V batteries are charged by the main battery and provide power for accessories, bow thruster, and generator start