GA-EMS Provides Services to Customers Worldwide with Products in 69 Countries and Offices in 5 Continents
Triangulating Power and Energy Technologies to Achieve Mission Success

GA-EMS’ growing portfolio of electromagnetic and electric products generate, store, and deliver power for a range of critical land, sea and space defense applications.
Engineering and design of the future surface fleet is driven by a significant power deficit

- Future system consumption exceeds generation on the majority of the fleet by 2030

Primary drivers

- Electric Propulsion
- Next Gen Radar
- Electronic Warfare
- Directed Energy Weapons
- Unmanned Systems
GA-EMS and the Energy Chain Align Strongly with Naval Strategies
End-to-End Power Solution Provider
Proven Technologies that Generate, Store and Deliver Power Solutions
Electromagnetic Aircraft Launch System
1.3 GW of Power Conversion Systems
Advanced Arresting Gear
Energy Absorber Modules with Diverse and Redundant Components

- Retractable Cross Deck Sheave
- Cable Shock Absorber
- Electric Motor
- Mechanical Brake
- Water Twister
- Purchase Cable Drum
Enabling the Future of Sea Control

- Advanced electric weapons counter complex threats cost effectively
- High firing rates enable engagements of simultaneous multiple threats
- Hypersonic kinematics lead to shorter engagement times and more rapid defeat of threats
High Speed, High Power Permanent Magnet Motor Offers 2x Greater Power in the Same Footprint

- Larger, higher power gas turbine
- High speed direct coupling eliminates speed reducing gearbox
- Smaller, high efficiency permanent magnet generator
Subsea Power and Energy Technologies
Safe Energy Storage · Adaptable Architecture · Improved Op Tempo

**LiFT**
Lithium-ion Fault Tolerant Batteries
On-Hull, At-Sea DNV-GL Certification

Extended Operational Life
Extreme Standby
Versatile Geometry
Health Monitoring

**ALPS**
Aluminum Power System
5X More Energy than Lithium-ion Rechargeable Batteries

- Secure High Energy Density System fully tested by NSWC Crane and approved for use in the manned SOCOM s301i vessel
- Performed Trade Study contract for deployment of LiFT batteries on the Large Diameter Unmanned Undersea Vehicle
- Awarded contract to provide battery systems for the Dry Combat Submersible, currently in assembly
- Under development for ONR, the system successfully completed a 46 day autonomous demo of ALPS at TRL-4
- Additional testing and fabrication is currently underway to advance a full-scale TRL-6 system for integration into a Large Displacement Unmanned Underwater Vehicle
Subsea Power and Energy Technologies

• Virginia Payload Tube hatch actuator prototype (funded by ONR) completed, tested to TRL 6 in lab

• Shallow Water Combat Submersible battery system
Power and Energy Technologies For Mission Success

Leading research and development of Transformative power and energy Solutions for complex defense applications