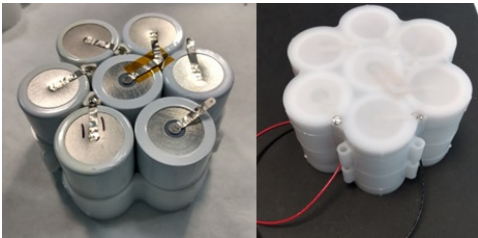


WHO

SYSCOM: NAVAIR
Sponsoring Program: PMA 264
Transition Target: SSQ101
TPOC: (301) 342-2069

Other Transition Opportunities: Using this newly developed high conductivity Carbon Monofluoride(CFx) morphology and cathode formulation, MaxPower is capable of manufacturing custom battery applications for any technology utilizing a lithium battery as a power source.

Notes: The image to the right shows MaxPower's new lithium battery technology developed for SSQ101, and the hermetically sealed final product.



MaxPower Incorporated

WHAT

Operational Need and Improvement: The present sonobuoy battery is a magnesium/silver-chloride battery (24.6W at 18V, for 6 hours weighing 2.48 pounds in a volume of 4.29 inch diameter by 2.54 inches in height). There is an excessive amount, approximately 20 troy ounces, of silver per battery currently used.

Specifications Required: During the effort the prototype system will be subjected to nail puncture and UN DOT testing for evaluation under abusive conditions. This will serve as a first step in safety testing prior to NAVSEA 9310 Naval Aviation certification to be completed in the Phase II.5 Option.

Technology Developed: The technology being developed by MaxPower will eliminate the consumption of this precious metal by utilizing a primary lithium technology coupled with a carbon monofluoride cathode to provide a high energy density battery capable of extending the life of the system to 10 hours in the existing form factor while reducing the mass of the system to 1.98 kg.

Warfighter Value:
Enhanced ASW capability through increased endurance enabling longer time on target.
Eliminates the consumption of silver in the Mg/AgCl seawater battery and reduces acquisition cost.
100% increase in life will require fewer deployed units and less aircraft space.
24.6W capability for 10 hours.
Primary battery capability for prolonged maintenance free storage without the need for recharging time or added infrastructure

WHEN

Contract Number: N68335-19-C-0531 **Ending on:** Jan 24, 2023

Milestone	Risk Level	Measure of Success	Ending TRL	Date
Battery test and evaluation	Low	Battery meets all benchmarks of success for SBIR Phase II requirements.	6	TBD

HOW

Projected Business Model: MaxPower is looking to produce the sonobouy battery in-house by scaling the primary lithium/carbon monofluoride Sub-D cell production to full scale quantiles in support of present and projected production quantities for the SSQ101 buoy.

Company Objectives: MaxPower is a special purpose developer of lithium based primary, secondary, and reserve batteries. MaxPower is a full service company capable of raw material synthesis, electrode coating, cell assembly, BMS development, and system integration.

Potential Commercial Applications: Using this newly developed high conductivity Carbon Monofluoride(CFx) morphology and cathode formulation, MaxPower is capable of manufacturing custom battery applications for any technology utilizing a lithium battery as a power source.