

Contact: Katie Lamb
(847) 259-9600, ext. 3542
Katie.lamb@ngc.com

Northrop Grumman-Protonex Team Selected to Develop New Fuel Cell-Based Power Pack for Military Applications

APOPKA, Fla. – Jan. 5, 2006 – The team of Northrop Grumman Corporation (NYSE: NOC) and Protonex Technology Corporation has been selected by the U.S. Air Force to design and develop a new energy-efficient, lightweight fuel-cell system to power various targeting, communications and other sensor equipment used by airmen on the battlefield.

Under the one-year contract with the Air Force Research Laboratory at Wright-Patterson Air Force Base in Ohio, Northrop Grumman and Protonex Technology will develop and test a fuel cell-based system featuring advanced battery technology and an intelligent power manager. The system will be based on Protonex's P2 fuel-cell product, which combines a 30-watt fuel-cell power system with chemical hydride fueling technology to provide continuous, long-duration power.

For its part, Northrop Grumman's laser systems business unit in Apopka will provide overall program management of the effort, and will ensure the fuel cell-based power pack is designed and tested to meet the stringent standards required by the warfighter on the modern battlefield and is interoperable with all applicable military equipment.

Fuel cells combine stored hydrogen with oxygen from the air to create electric power. Fuel cells can provide much higher energy density than the batteries they will replace while weighing up to one third less.

The power supply is a key element for airmen on the ground. Ultimately, thousands of these kits could be retrofitted with the new fuel-cell technology. It is anticipated that following this development effort, a second year of funding will enable the hardening of the system to make it battlefield ready with follow-on production of several hundred units. Ultimately, as the system matures, sales to all military branches could reach 15,000 units.

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“Our team’s primary objective is to provide airmen on the ground with increased combat capability, while reducing the weight of their equipment,” said Bill Walters, Northrop Grumman program manager. “This technology will allow battlefield airmen to carry more ammo and water, instead of heavy conventional batteries to power their equipment.”

“Protonex’s contributions to this joint development program will leverage our extensive systems integration experience, along with our patented fuel-cell technology,” stated Greg Cipriano, vice president of marketing and military development for Protonex. “We have already developed a prototype fuel-cell system that is achieving metrics in line with the military specifications, and look forward to advancing this technology.”

Protonex Technology Corporation develops and manufactures the smallest, lightest and highest performing fuel-cell systems for portable power applications in the 10 to 500 watt range. The company is meeting the needs of customers for off-grid applications underserved by existing technologies by providing customizable, stand-alone portable power solutions and systems that may be hybridized with existing power technologies. Protonex is based in Southborough, Mass., and has established partnerships with Northrop Grumman, Parker Hannifin Corporation and Millennium Cell Inc. to jointly develop advanced power solutions.

Northrop Grumman’s Laser Systems unit, based in Apopka, Fla., designs, develops and produces tactical laser rangefinders and designators for the U.S. Armed Forces and foreign militaries. Laser Systems is a component of Northrop Grumman's Baltimore-based Electronic Systems sector—a world leader in the design, development, and manufacture of defense and commercial electronic systems, including airborne radar, navigation systems, electronic countermeasures, precision weapons, airspace management systems, communications systems, space sensors, marine and naval systems, government systems and logistic services.

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