



Lockheed Martin gets Marines' contract to add solar panels to Cleveland-developed fuel cells

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By **Robert Schoenberger, The Plain Dealer**

CLEVELAND, Ohio -- Defense contractor Lockheed Martin has won a \$3 million contract to integrate solar panels into Cleveland-developed fuel cells for the Marines.

Lockheed and Cleveland-based **Technology Management Inc.** have been developing and marketing portable fuel cells to the military for more than two years. TMI's cells can generate electricity from the diesel-like fuel mix the military uses for its vehicles and generators.

The military is looking for alternatives to the noisy diesel generators it uses to power computers and other electronic devices in war zones. In 1994, the Army estimated that fuel can make up 70 percent of the material (by weight) brought to war. Fuel has been a logistical problem in Iraq and Afghanistan, requiring the military to use delivery convoys that have become targets of insurgent groups.

TMI President and Chief Executive Benson Lee said fuel cells offer obvious benefits to the Marines because they're more efficient than diesel generators, allowing the military to get more electricity with less fuel. They also run quietly and can be placed inside field tents instead of being set up dozens of yards away.

Lee said adding solar panels to the cells will let the Marines use less fuel, allowing them to generate even more electricity from smaller amounts of fuel.

"When you combine them [fuel cells and solar panels], you get more power availability," Lee said. "The overall logistical footprint is reduced."

Lockheed said the goal of the 32-month contract is to produce a system that can cut the fuel usage of generators in



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Lockheed Martin

Cleveland's Technology Management Inc. developed the fuel cells that defense contractor Lockheed Martin has been marketing to the military for the past two years. The company said Wednesday that it has won a \$3 million contract from the Marines to integrate solar panels into the fuel cells.

half. **The Office of Naval Research** is overseeing the program.

The military uses more than 100,000 generators worldwide, so a successful system could be a big development both for Lockheed and TMI.

Lockheed vice president Dan Heller said in a prepared statement that cutting fuel use could make troops safer. Heller added that portable fuel cells could reduce risk to soldiers who are in "some of the world's toughest conditions."

TMI builds the fuel cells that could be used by the **Marines** at a plant in Highland Heights. Lee said the latest contract is another step in **the development of Ohio's fuel-cell industry**. Lockheed and TMI have won several round of funding from the state's Third Frontier initiative and have won multiple contracts from the U.S. Department of Defense.

Lee said the latest contract "is another step, another piece of this maturing, strategic partnership we have with the world's largest defense contractor."

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