

## Colorado Company Instrumental in Reducing U.S. Military's Fuel Dependency

Department of Defense energy bloggers and a captain in the U.S. Marine Corps identified HOMER® renewable energy software as an important tool in the U.S. Military's need to identify alternative sources of electric power.

Boulder, CO (PRWEB) January 20, 2011 -- The U.S. military is going green. But how is that going to happen? According to the Marine Corp., one way is the Hybrid Optimization Model for Electric Renewables (HOMER).

HOMER Energy LLC of Boulder, Colo., is getting some heavyweight attention these days, following findings published by Captain Brandon Newel of the Expeditionary Energy Office in September 2010.

Through two detailed experiments, Capt. Newell confirmed that the HOMER modeling system is accurate and should be used by the military. According to his thesis abstract, "the model was calibrated to the particular system to ensure that the model's energy estimate matched that of the actual system. ... The final portion of this thesis shows the advantage of using HOMER as part of the Experimental Forward Operating Base."

In fact, last month the HOMER modeling software—managed by HOMER Energy LLC—was the focal point of the Department of Defense's (DOD) Energy blog.

"This means that...facilities engineers now have a tool that allows them see what non-fossil-fuel options are open to them," said the blog author Dan Nolan. "I hope they take their lead from Capt. Newell's work and exploit this tool to reduce fuel use and transportation."

The U.S military has internal directives to maximize taxpayer dollars and to implement alternative energies and reduce diesel-fuel dependency.

"Appropriate energy-analysis can lead them, in the very near term, to having real systems working on the ground," said Ted Vogel of North Carolina-based 12 South LLC, who attended the last Pentagon Energy Conference.

Currently, U.S. military forces in foreign countries rely largely on diesel generators. This is dangerous and inefficient. The fuel has to be shipped in, making the convoys targets and costing soldier lives.

"Power and Energy costs are posing a greater threat to national security and changing expeditionary warfare," state the materials for the 2010 USMC Expeditionary Power and Energy Symposium.

Vogel notes that, "an excess of 180 fuel trucks were blown up in Pakistan the first week of October 2010 and a lot of that was fuel for the U.S. military or U.S.-funded initiatives."

HOMER makes it possible to identify the right combination of components and storage devices to reliably meet an area's need for electrical power—an incredibly complex process that may include a mix of renewable and traditional power sources. Without the right tool, it would be impossible. It was this realization that led the National Renewable Energy Laboratory and Peter Lilienthal, Ph.D., to develop HOMER.

"Opportunities exist to...generate power more efficiently and to make better use of alternativeand renewable-energy resources," says the Marine Corps. In light of fuel-dependency concerns, few organizations or countries are going to leave such opportunities on the table.

Over 56,000 individuals and groups, in 193 countries, have downloaded versions of the software managed by HOMER Energy and used by Capt. Newell. Modeling has to be readily available and easy to do, because the myriad of details—including fuel prices, component prices, load changes, solar and wind resources—change often and differ from place to place.

"It's easy to make things work if cost is no object," says Lilienthal, CEO of HOMER Energy. "The challenge is finding out how to do anything in the most cost-effective way, especially if you're talking about renewables and storage, both of which are expensive."

HOMER identifies the combination of components that has the lowest cost. No other renewable energy software available takes this approach.

"The American Public invests greatly in the Marine Corps," states the organization in a February 2010 document. "In turn it is our obligation to...provide them the best return on their investment."

## **About HOMER Energy**

HOMER Energy is a privately held company in Boulder, Colo. It supplies consulting services and software vital to the rapidly growing, international, renewable, distributed-energy market, forecast to be \$80 billion by 2014. In 2009, HOMER Energy received a license from the US National Renewable Energy Laboratory to be the exclusive commercialization agent for enhancing, supporting, and distributing the HOMER software worldwide. HOMER is used by systems integrators, equipment manufacturers, utility companies, facilities managers, governments and non-profit organizations to design hybrid power systems. It analyzes diverse, distributed-energy applications, including grid-tied renewable systems, cogeneration systems,

and the micro-grid needs of remote communities and islands. For more information about HOMER and to download the software, please visit <a href="http://www.homerenergy.com">http://www.homerenergy.com</a>

## Resources

 $\frac{https://docs.google.com/viewer?a=v\&pid=explorer\&chrome=true\&srcid=0B3h2kR8H1-tlZGUwMzUwMDQtZjI0NS00NDc2LWE5YTItMDNlOWVlYmZhMDQ4\&hl=en\&authkey=CKHCjJQE$ 

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http://edocs.nps.edu/npspubs/scholarly/theses/2010/Sep/10Sep\_Newell.pdf

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