

## Waking a Sleeping Giant: Boulder Software Firm Helps Meet Soaring Energy Demand in the Developing World

As demand for energy in the developing world grows more quickly than the ability to deliver it via a conventional grid, HOMER Energy of Boulder uses software its principals developed at the National Renewable Energy Laboratory to design cost-effective "hybrid" power systems - hybrid renewable microgrids.

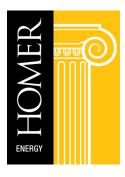
Boulder, CO June 14, 2012 – In some of the most remote corners of the world – Asia, Africa, the Middle East, Latin America, and tens of thousands of islands – a sleeping giant is preparing to awake and change the face of global energy usage. Energy market research leader Pike Research issued a press release recently in which they aptly named the off-grid electricity market in developing countries a "sleeping giant" – one that could be worth over \$10 billion in a few years. HOMER Energy, a software startup based in Boulder, has been preparing to support and enhance the emergence of this market for over two years, through commercialization of the HOMER software product, which was originally developed at the National Renewable Energy Laboratory.

HOMER, which stands for Hybrid Optimization Model for Electric Renewables, is a computer simulation model that identifies least cost options for development of "hybrid renewable microgrids", locally-based electric power generating systems that combine renewable power sources with diesel generators and storage. Microgrids deliver electricity where the grid cannot go – either for practical or economic reasons.

Designing reliable hybrid power systems is challenging because only a few of the hundreds or thousands of possibilities is likely to be economically favorable. Mistakes can mean either paying for equipment or capacity that isn't needed, or ending up with a system that isn't sufficient to meet the needs. HOMER answers two simple questions – "What works?" and "How much will it cost over the life of the system?"

According to Pike Research, the market for global remote microgrids will grow from 349 megawatts of generation capacity in 2011 to over 1.1 gigawatts in 2017, as a result of burgeoning demands for electricity in areas not served by the traditional electric grid. Yet this market, predicted to reach \$10.7 billion in value by 2017, continues to fly under the radar of investors.

HOMER Energy has been quietly betting on the market's emergence, making enhancements and updates to the HOMER model that will allow it to change and evolve



rapidly as technologies change. First released to the public by NREL in 1998, the number of registered users has tripled since 2008. New versions aimed at different segments are being prepared for general release.

"We are not just delivering a model; we are enabling a market," says Stanford Ph.D. Peter Lilienthal, HOMER Energy CEO and original creator of the HOMER model. "What we originally developed for the village power market has been enhanced to serve the needs of an exploding global market for the transformation of diesel-powered grids to incorporate renewables and storage. This market requires neither incentives nor subsidies to be economically feasible. Over 5 million barrels of oil are burned each day for electricity."

The developing remote microgrid market is a winner for everyone – investors, vendors, and the ultimate end users, many of whom will have electricity for the first time ever.

## **About HOMER Energy**

HOMER Energy is a privately held company located in Boulder, Colorado. It supplies software and services to the rapidly growing international renewable distributed energy market. 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 has been downloaded by over 76,000 people in 193 countries worldwide and is used by systems integrators, equipment manufacturers, utilities, facilities managers, governments, and non-profit organizations to design hybrid power systems. HOMER analyzes diverse distributed energy applications including grid-tied renewable and cogeneration systems, and situations where the grid is non-existent or insufficiently reliable - such as islands and remote communities. Visit http://homerenergy.com to download the software.

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