Press Release

HOMER ENERGY

Modeling Boulder's Energy Options: HOMER® Energy and CU Collaborate to Simulate More Renewable Energy

HOMER Energy and the University of Colorado are analyzing energy scenarios that estimate the feasibility, costs, and CO2 implications of adding more renewable resources to Boulder's power mix.

Boulder, CO, September 17, 2010 – HOMER Energy and the multi-disciplinary Renewable and Sustainable Energy Institute (RASEI http://rasei.colorado.edu/) at the University of Colorado will be working during the next year to model new energy scenarios for the city of Boulder. Boulder makes an ideal case study because of its strong political will to integrate clean energy resources, its new smart grid capabilities, and the technical characteristics of the existing electric grid. Because the range of future energy options is so complex, simulation modeling is essential for planning.

The research project, led by Dr. Paul Komor and supported by Dr. Rebecca Johnson, will explore scenarios that combine micro-grid and smart grid technologies with multiple types of distributed and renewable power generation and storage technologies. The project is designed to test whether smart micro-grids could allow greater reliance on renewable energy resources in Boulder, and what the implications might be for energy costs, CO2 emissions and grid reliability.

The researchers will explore the impacts of smart micro-grid technologies using the HOMER energy modeling software, an internationally known and widely-used tool for modeling distributed and renewable electricity systems on micro-grids. HOMER simulates and compares the performance of multiple energy systems by varying the capacity of components such as wind, solar, batteries, flywheels, conventional generators, fuel cells, the macro grid and other factors. HOMER determines the optimal combination of power sources by comparing capital, operating costs and emissions over the life of the system.

Dr. Peter Lilienthal, CEO of HOMER Energy, is delighted that HOMER, which was originally designed at the National Renewable Energy Laboratory for use in off-grid villages in developing countries, has come full circle to be used in Colorado. He notes, "Suddenly there is a huge amount of interest in micro-grids here in the US. We think that HOMER has an important role to play in modeling cost-effective distributed and renewable energy systems anywhere."

Dr. Paul Komor points out that micro-grids and smart grids have the potential to work synergistically to provide intelligent electric infrastructure that can incorporate growing amounts of renewable and distributed energy. According to Dr. Komor, “Multiple factors are causing policy makers to focus on alternatives to traditional centralized electricity systems. Those factors include the falling costs of renewable technologies such as wind and solar, rapid advances in electricity storage and plug-in vehicles, and the integration of information technology with the power system.”

Dr. Rebecca Johnson says the research project will first analyze a 3% distributed and renewable energy scenario based on Colorado’s latest Renewable Energy Standard. It will then consider higher penetrations of distributed and renewable resources and the benefits that demand response could provide to enable increasing penetrations of renewable energy.

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, forecast to be $80 billion by 2014. In 2009, HOMER Energy received a license from NREL to be the exclusive commercialization agent enhancing, supporting, and distributing the HOMER software worldwide. HOMER has been downloaded by over 47,000 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, or situations where the grid is non-existent or insufficiently reliable - such as islands and remote communities. For more information about HOMER and to download the software, please visit http://www.homerenergy.com

# # #

Contacts:

Peter Lilienthal
CEO, HOMER Energy
peter.lilienthal@homerenergy.com
Tel: 720-565-4046

Paul Komor
CU Renewable and Sustainable Energy Institute
komor@colorado.edu
Tel: 303 492 7805

Rebecca Johnson
CU Renewable and Sustainable Energy Institute
rebecca.Johnson@colorado.edu
Tel: 303 902 2808