Microgrid Power System Design Services

The HOMER software is the global standard for economic analysis of sustainable microgrid systems for remote power, island utilities, and microgrids, with over 100,000 users in 193 countries. HOMER was originally developed at the U.S. DOE's National Renewable Energy Laboratory (NREL). Its developers are now the principals of HOMER Energy, which has the exclusive license. From this unique position, HOMER Energy provides a variety of services to facility managers, project developers, program planners, and technology developers to help them design cost-effective and sustainable power systems.

Project screening and rapid assessment

HOMER is ideally suited for screening potential microgrid projects. Developers need to determine quickly whether a project is promising enough to pursue. Facility managers need an independent, un-biased review of proposals. Program managers need to prioritize potential projects. HOMER uses either approximate data or highly detailed data when available. Its sensitivity analyses identify where additional data collection efforts would be most valuable.

Prefeasibility analysis and conceptual design

New technologies provide a bewildering array of possible microgrid design choices. HOMER helps developers determine which renewable (solar, wind, biomass, or small hydro), storage (e.g. lead-acid, zinc, vanadium, nickel, lithium, flywheel, or hydrogen) technologies are cost-effective, what load management, combined heat and power and other diesel optimization options make sense, and what is an optimal capacity for each of these. HOMER saves developers substantial effort and expense by narrowing these conceptual design choices at the prefeasibility stage rather than performing detailed engineering designs on suboptimal system designs.

Customized design tools for use by staff engineers

Frequently, technology and project developers want more technical detail than is appropriate for the public versions of HOMER. For example, they may want algorithms, or financial structures that are specific to their projects or proprietary technologies. HOMER Energy will create customized and branded versions of HOMER at clients' direction for use by their staff engineers.

Software training

- Online trainings walk you through the basics of HOMER
- Personalized on-line training to meet your needs
- On-site single day training workshops focus on introducing new users to HOMER
- Multiple-day on-site training workshops customized to user needs
- Longer engagement by agreement
- Learn more at http://homerenergy.com/HOMER_training.html