Microgrid decisions simplified

HOMER Software

Optimize your renewable hybrid power system

UL Solutions is the exclusive developer and distributor of HOMER (Hybrid Optimization of Multiple Energy Resources) software, a leading global solution for the economic optimization of microgrid design in all sectors.

HOMER software solutions:

- Combine engineering and economics in one powerful model
- Allow users to quickly and efficiently determine least-cost options
- Simulate real-world performance and deliver a choice of optimized design
- Consider geographic-specific criteria and risks, such as fuel price changes, load growth, accelerated battery degradation and changing weather patterns

UL Solutions provides market-leading software solutions to help make hybrid power systems technically optimal and maximally cost-effective. Whether designing hybrid microgrids or distributed generation systems in this rapidly expanding market, our software solutions guide stakeholders in addressing challenging questions:

- What is the optimal mix of components for my microgrid?
- How will we find customers?
- How do we educate customers about our solutions?
- How do we quickly demonstrate the value of our solutions?

With solutions designed specifically to model renewable hybrid power systems — either standalone or connected to the power grid — our software helps you make informed decisions. Capabilities include:

- Analysis, optimization and design
- Market access and promotion for your component
- Interface with your controller or web-based application
- Training and support

UL Solutions

Safety. Science. Transformation.™

Product offerings

Desktop software
Powerful modeling software with a 21-day free trial and flexible license configurations.

HOMER Pro: Get rapid insight into the complexities and trade-offs of cost-effective, reliable standalone microgrids and hybrid energy systems.

HOMER Grid: A robust, powerful tool for optimizing the value of behind-the-meter, grid-tied, distributed energy systems, especially when demand charges and energy arbitrage matter.

Online tools
Browser-based tools perfect for users with less complex projects or those new to HOMER software.

HOMER QuickStart: Designed specifically for the energy access market, HOMER QuickStart optimizes simple off-grid hybrid power systems. This free web tool provides the perfect introduction to the capabilities of HOMER software. You will experience how a model helps you make tradeoff decisions for your hybrid renewable power systems. QuickStart is built on the HOMER SaaS application program interface (API) and produces files that can be read by HOMER Pro.

Application program interface (API) options
For integrating the world-class HOMER engine and components in your own custom applications.

HOMER SaaS API: This application program interface gives you the power of HOMER in your own web-based application. With access to the components within HOMER Pro or HOMER Grid, you can create a custom interface or workflow.

HOMER Controller API: A controller manages a microgrid's components to provide power in the most economical way possible. Our products include a choice of controller algorithms. The HOMER Controller API lets you use and distribute your controller as an option in the HOMER platform or use it internally with your own modeling.

Services, support and training

Professional services:
Experts at UL Solutions provide a broad range of analytical services related to distributed and renewable energy. Our staff advises utilities, governments, technology developers, energy users and a wide variety of other types of customers on HOMER analysis, strategic planning, market analysis and economic analysis of individual projects. Options are available for project-based or short-term analysis or comprehensive advisory services.

Training and support:
Get your sales team on board quickly
With over 80 years of combined analysis and design experience, our experts are here to help you with all of your microgrid and distributed energy modeling needs.

Training: We offer everything from online introductory programs to weeklong intensives at your facility or ours. We work with you to establish modeling practices that serve your team and your customers.

Support: Premium support gives you priority access to HOMER engineers for assistance with project planning, design advice, file reviews and much more.

We work with

- Project owners
- Component manufacturers
- Consulting firms
- Utilities and coops
- Municipalities
- Island governments
- Nongovernmental organizations (NGO)
- Project integrators
- Engineering, procurement and construction (EPC) firms
- Financing organizations
- Military
- Telecoms
- Oil and gas
- Mining
- Hospitals
- Ecotourism
- Rural communities
- Universities
- Students and teachers
- Interested individuals

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