Intelligently optimize behind-the-meter systems

HOMER Grid modeling software optimizes the value of grid-connected, behind-the-meter, distributed generation systems, especially when demand charges, resilience and energy arbitrage matter. With HOMER Grid, you can intelligently reduce the peak power you buy from the utility each month, determine the best mix of resources for the least-cost solution, design a system with the highest rate of return, and demonstrate the value of your behind-the-meter system.

HOMER® Grid

HOMER Grid helps reduce demand charges, improve resiliency, charge electric vehicles and cut carbon

Combine value streams and compare the impact of design choices
HOMER® Grid combines economics, engineering and multiple value streams and approaches in one model, then rapidly performs complex calculations to find the least-cost solution. You save energy costs by reducing demand charges and accurately understanding the savings gained from investing in your power system. Robust capabilities for electric vehicle (EV) charging, demand response programs, incentives, resilience and reliability are included.

Customize system design for specific site requirements
Specify your system choice in moments with thousands of preloaded equipment options, including solar photovoltaic (PV), storage, wind, combined heat and power, and generators. Choose from a library of utility tariffs, incentive programs, electric load profiles, and solar and wind resources. Or import or create your exact specifications.

Earn confidence and win sales with insightful proposals
Quickly turn your analysis into a branded proposal that demonstrates cost savings to your customer. Present key aspects of a proposed system, offer clear cost comparisons and outline economic value streams. A professional proposal helps you save preparation time and earn customer trust.

UL Solutions

Cut energy costs and maximize internal rate of return with critical modeling capabilities

Demand charge reduction – Determine the best resource mix for the least-cost solution and highest rate of return.

Incentive and demand response programs – Quickly understand the value of participating in demand response programs and include additional savings when local incentive programs apply.

EV charging – Quickly evaluate your options for an economically optimal EV charging system.

Resilience – Provide an additional value stream by proving the value of your project during extended outages.

Robust storage model – Accurately model battery life and performance for the duration of your project.

Comprehensive features provide flexible design and help demonstrate system value

Value-stacking – Understand and demonstrate how value streams, including demand charge reduction, energy arbitrage, self-consumption and incentive programs, can help maximize ROI.

Cutting-edge dispatch strategy – The software's proprietary approach picks the best economic options for serving your load at each time-step — based on tariffs, weather and available power components.

Beyond solar and storage – Include combined heat and power, wind and backup generators in your model and design to meet your specific needs.

Understand and quantify risk – Easily compare scenarios to understand the potential impact of changes and uncertainties. Evaluate key indicators, such as internal rate of return and break-even date, for each possible system.

Customer-facing proposals – Customized reports help increase sales and improve communication.

Powerful, proven optimization – See every combination of system type in a single run to find an optimal design.

Dig deep into details – Thousands of options for graphical and tabular results demonstrate how each potential system would operate.

Completely customizable – Tailor your design to specific projects with options including solar-plus-storage, generators, combined heat and power, wind and EV charging.

Global resource data – Import solar data from the National Renewable Energy Laboratory (NREL) and NASA databases or upload your own measured or purchased resource data.

Accurate PV production data – Combine the power of solar modeling tools, like HelioScope or PVSyst, with HOMER Grid for increased modeling accuracy and more bankable results. Or use our Homer Grid internal PV production calculator.

Get the power of UL Solutions HOMER Software

With the trusted HOMER simulation engine at its core, HOMER Grid is based on decades of experience in hybrid system optimization. HOMER software has enabled more than 250,000 users in over 190 countries to produce economic feasibility studies, system design, energy insight and energy cost savings. UL Solutions provides a strong foundation to empower people around the world with tools, services and information to accelerate the adoption of renewable and distributed energy sources.

Try HOMER Grid for free at homerenergy.com/trygrid or contact sales@homerenergy.com to learn more.

UL Solutions
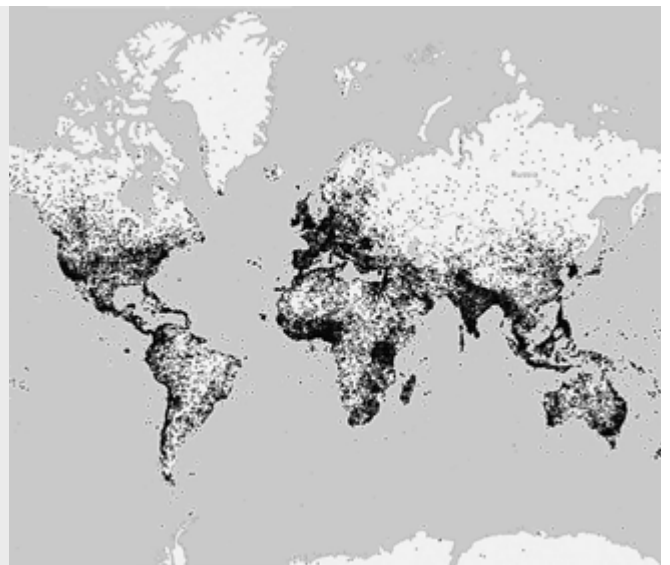
Safety. Science. Transformation.™