

# Customized software tool enables medical facilities to meet electrical demands

## HOMER SaaS API

### Challenge

When the coronavirus pandemic hit, developing countries urgently needed to meet the increased energy demands of treating an influx of critically ill patients. Health facilities with limited engineering resources now had to determine the electrical requirements of specific essential medical equipment and design a power system with the required capacity.

### Solution

World Bank contracted with UL Solutions to update Powering Health – a complimentary online tool built with the HOMER SaaS application program interface (API). The online tool was initially designed in 2011 to make it easy for non-engineers to design hybrid renewable energy systems and find the least-cost power system.

To meet the needs of COVID-19 patients, in 2020 UL Solutions augmented Powering Health with an extensive database of energy requirements for common health clinic equipment.

### Impact

Using Powering Health, health practitioners can develop a power system to meet a facility's energy needs for the lowest cost. Users develop and load profiles using the extensive database of needed medical equipment and related energy requirements, and then identify the least cost power system to reliably meet those loads. With access to right-sized electrical power, rural health clinics can better respond to patient needs and the most vulnerable countries can better address the ongoing crisis.



*Powering Health is one example of a customized HOMER SaaS API, which enables the creation of a modeling tool with a specific focus.*

See Powering Health at:

[PoweringHealth.HomerEnergy.com](https://PoweringHealth.HomerEnergy.com)



Determine lowest-cost energy



Design reliable power systems



Meet patient needs

*HOMER SaaS API enables rural health clinics to develop right-sized electrical power that can enable better care for patients.*

*Powering Health enables non-engineers to design hybrid renewable energy systems to meet the needs of specific medical equipment.*



## CASE STUDY

Sample screenshots (right) are an example of Powering Health's analysis of power needs based on specific inputs. HOMER SaaS API enables customized web applications to:

- Seamlessly integrate HOMER into your software platform
- Streamline internal processes
- Generate leads and qualify customer

*UL Solutions collaborated with World Bank's Energy Sector Management Assistance Program (ESMAP), and We Care Solar, as well as numerous experts to update Powering Health on a fast track and meet the urgent need for preparedness. Powering Health was initially created in 2011 with funding provided by U.S. Agency for International Development (USAID).*

## Software specifics

Powering Health is one example of a customized web application using HOMER Software. It models stand-alone or grid-connected hybrid renewable energy systems that integrate batteries, diesel generators and solar panels.



In Powering Health, location look-up loads the location and solar data.

Equipment	Quantity	Name/Type	Average Power (kW)	Peak Power (kW)	...
2) 200kW Solar Panel	2	200	200	200	...
3) 10kW Inverter	1	10kW	10	10	...
4) 10kWh Battery	1	10kWh	10	10	...

Inputs, such as electric load, can be specified.



Outputs, such as photovoltaic (PV), are displayed as graphs and tables.

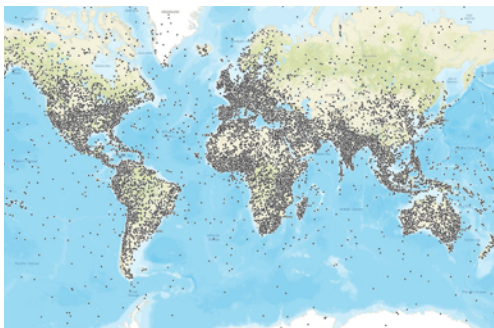
Component	Capital	Replacement	OSW	Fuel	Salvage	Total
Generic flat plate PV	\$10,000	\$0	\$0	\$0	\$0	\$10,000
Battery Storage	\$10,000	\$0	\$0	\$0	\$0	\$10,000
Grid Connection	\$0	\$0	\$0	\$0	\$0	\$0

Cost summaries and table of contents provide critical, easy-to-find information.

## Why HOMER SaaS API?

HOMER SaaS API enables you to create customized web, mobile or desktop applications built on the power of HOMER Pro or HOMER Grid – a leading platform for optimizing distributed energy resources (DERs) and microgrids across all sectors. Companies and organizations of all sizes use HOMER SaaS API to deploy custom applications.

For more information, visit [homerenergy.com](http://homerenergy.com).



More than 250,000 users enabled by HOMER software are in over 190 countries.



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