



## REopt Lite Web Tool

Building on the success of the REopt™ renewable energy integration and optimization platform, NREL has developed a free, publicly available web tool called REopt Lite. REopt Lite evaluates the economics of grid-connected photovoltaics (PV) and battery storage at a site, allowing building owners to identify the system sizes and battery dispatch strategy that minimize their life cycle cost of energy. The tool also estimates the amount of time a PV and storage system can sustain a site’s critical load during a grid outage.

### Sizing and Dispatch

REopt Lite utilizes a mathematical optimization model to recommend the optimal size and dispatch for solar PV and energy storage. Users are prompted for a few simple inputs

about the site such as location, utility rate, and energy consumption, which the tool uses to run an initial analysis.

More-advanced users can also edit many of the model’s default values such as technology costs and efficiencies, analysis horizon, and financial parameters. Users are provided with a summary results table, an interactive dispatch graph, and a downloadable pro-forma.

### Resilience

REopt Lite also allows users to explore how PV and storage can increase a site’s resilience during a grid outage, if the systems are configured to operate when disconnected from the grid. The tool can size systems to sustain critical loads during user-specified outage periods; it can also report the minimum, average, and maximum number of hours the PV and storage system could sustain the critical load for outages at varying times during the year.

### When to Use REopt Lite

REopt Lite helps users answer questions such as:

- What sizes of PV and storage are most cost-effective for my site?
- What percentage of my energy needs can PV cost-effectively provide at my site?
- How can I use storage to reduce demand charges at my site?
- When should I charge and discharge my battery to minimize my energy costs?
- How long can PV and storage power my critical site energy load during a grid outage?

### Learn More

Evaluate the economics of PV and battery storage systems using the REopt Lite web tool: [reopt.nrel.gov/tool.html](http://reopt.nrel.gov/tool.html).

Find more information about the REopt platform: [reopt.nrel.gov/](http://reopt.nrel.gov/).

Contact the REopt development team: [reopt@nrel.gov](mailto:reopt@nrel.gov).

### Comparison of REopt Lite and REopt Platform Capabilities

	REopt Lite Web Tool	REopt Platform
<b>Technologies</b>	PV + storage	PV, solar hot water, solar ventilation preheating, wind, biomass, landfill gas, ground-source heat pump, storage, others
<b>Sites</b>	Single site	Multiple sites
<b>Loads</b>	Electric; hourly interval data, or <a href="#">DOE reference buildings</a>	Electric, thermal, water; hourly or 15-minute interval data, or DOE reference buildings
<b>Rates</b>	Rate tariffs selected from <a href="#">URDB</a>	Blended rates or complex rate tariffs entered by user
<b>Resiliency</b>	Simple outage analysis	Simple outage analysis or complex stochastic outage modeling



### National Renewable Energy Laboratory

15013 Denver West Parkway

Golden, CO 80401

303-275-3000 • [www.nrel.gov](http://www.nrel.gov)

NREL is a national laboratory of the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Operated by the Alliance for Sustainable Energy, LLC

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