REopt Lite Tutorial: International Locations

The REopt Lite™ web tool was designed for locations within the United States. However, with appropriate adjustments, it is possible to use most of its features for international locations.

Site Location and Utility Rate

Selecting a site location outside the United States will prompt a message that no electricity rates can be found for the location. This is because the utility rate database used by REopt Lite does not include international locations. However, custom utility rates can be entered as simple annual or monthly rates. Detailed rates, with variable prices dependent on times and months, can also be entered if the user is registered and logged in to a user account. Details of rate structures for some international locations can be found at the OpenEI International Utility Rate Database.

Currency

Currency values are all in U.S. dollars (USD). Conversions from the local currency to USD can be made for inputs of utility rates, system costs, and incentive values. Conversion of the final results of the evaluation, from USD back to the local currency, will then be necessary. One free web tool for currency conversion approximation is Currency.Wiki.

Load Profile

The Load Profile option for simulated load data is based on U.S. building and climate area data. If this simulated load option is used, the simulated load profile should be checked for reasonableness for the climate of the selected location.

Financial Information

Financial, tax, and incentive input defaults in all sections need to be carefully considered and altered to match local tax and interest rates and available financial incentives. Default costs for technology systems are also based on typical costs in the United States. Resources for researching international renewable energy costs are available from the International Renewable Energy Agency.

Solar Production Data

Solar production data is taken from NREL's [PVWatts](#)® dataset, which includes many international locations. REopt Lite will use the closest available location that is found to have resource data, so the user should independently confirm that PVWatts includes data for a location that is acceptably close to their site location. The available resource data locations can be found using PVWatts. Users who have access to hourly custom solar production data for their site can upload it in the Advanced Inputs section, and it will be used instead of PVWatts data.

Wind Resource Data

Wind systems cannot currently be modeled from the web tool user interface for international locations due to lack of international wind resource data. However, if the user has hourly wind resource data for their site, they can use this data in the application programming interface (API) instead of the web tool interface to complete an optimization.

Learn More

For more information on tool inputs and default values, please see the [REopt Lite Web Tool User Manual](#).

Find additional REopt Lite tutorial documents and videos on [reopt.nrel.gov/user-guides.html](#).

NREL's REopt Lite web tool helps users evaluate the economic viability of distributed photovoltaic (PV), wind, battery storage, combined heat and power, and thermal energy storage systems. It identifies system sizes and battery dispatch strategies to minimize energy costs, and estimates how long a system can sustain a site's critical load during a grid outage.

Learn more about REopt Lite at [reopt.nrel.gov/tool](#).