

U.S. DEPARTMENT OF ENERGY

Building Efficiency Targeting Tool for Energy Retrofits (BETTER)

A new tool that advances the science of remote, data-driven energy analysis to increase the speed and scale of building decarbonization and retrofits globally

About BETTER

BETTER is a software toolkit that delivers actionable insights to improve energy, emissions, and financial performance in buildings and portfolios without requiring site visits and complex modeling. Through advances in remote building energy analytics, BETTER replaces a preliminary on-site audit, streamlines an investment-grade audit, uncovers no- cost and lowcost efficiency measures to immediately cut energy costs across a portfolio, and targets the buildings that can most easily achieve net zero energy.

How it Works

BETTER utilizes an open-source, data-driven analytical engine and user-friendly web interface to automatically analyze a building's monthly energy usage in response to weather conditions. With minimal data inputs, the tool benchmarks a building's electric and fossil energy usage against peers; quantifies energy, cost and greenhouse gas (GHG) reduction potentials at the building and portfolio levels; and recommends energy efficiency measures to decarbonize and electrify buildings and portfolios. BETTER also estimates the amount of electricity that



can be generated by installation of rooftop solar panel arrays on a building to determine the building's readiness to achieve net zero energy.

Who is Using BETTER?

BETTER is used globally by national and local government agencies, such as Mexico's National Commission for the Efficient Use of Energy (CONUEE) and the National Agency for Energy Management in Tunisia (ANME); energy service companies, including Johnson Controls and Acciona; multinational corporations, such as Jones Lang LaSalle and 3M; investors and lenders, like Fibra Uno and Citi; educational institutions, such as the Technological Institute of the Construction industry (ITC) in Mexico; and non-profit organizations, such as World Resources Institute (WRI).

Building Types Supported

BETTER can be used to analyze the performance of any commercial building type for which a user can enter all required data for at least 30 buildings. At this time, BETTER can also be used to analyze the performance of a single building, or a portfolio of less than 30 buildings, for U.S. offices, K-12 schools, and multifamily residential buildings; Mexican offices and restaurants; and Tunisian hotels.

U.S. DEPARTMENT OF ENERGY Office of ENERGY EFFICIENCY & RENEWABLE ENERGY BUILDING TECHNOLOGIES OFFICE







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How to Use Better

BETTER Inputs

- Data inputs are minimal:
- Building ID or name
- Location
- Gross floor area (excluding parking)
- Primary building space type (i.e., office, hotel, restaurant)
- 12 consecutive months of energy use and costs for all fuels used in the building

BETTER Output Reports

Single Building:

- Annual energy, cost, and emissions reduction potential
- Energy efficiency recommendations and implementation guidance
- Annual utility cost and savings breakdowns by load type
- Monthly electric and fossil energy use trends
- Electricity and fossil fuel changepoint models and benchmarks

Portfolio:

- Annual energy, cost, and emissions reduction potential
- Top 5 energy efficiency recommendations
- Electricity and fossil energy use intensity (EUI) and cost savings comparisons by building
- Ability to sort, rank, and prioritize buildings for upgrades

Applications



BETTER | Mexico is a Spanish translation of the BETTER toolkit and adds a building energy database specific to Mexico and customized Mexico building electricity and fossil energy consumption

statistics to deliver accurate and precise benchmarking and retrofit analysis of buildings in Mexico. Support for development and deployment of BETTER | Mexico comes from USAID Mexico, the USAID EE4D program, and the Mexico City Secretariat of the Environment (SEDEMA). **To get started, visit better.lbl.gov/ country/mexico/**

BETER | TUNISIA

BETTER | Tunisia is a French translation of the BETTER toolkit and adds a building energy database specific to Tunisia and customized Tunisia building electricity and fossil energy consumption statistics



to deliver accurate and precise benchmarking and retrofit analysis of buildings in Tunisia. Support for development and deployment of BETTER | Tunisia comes from USAID Tunisia, the USAID EE4D program, and ANME in Tunisia. **To get started, visit** https://better.lbl.gov/country/tunisia/

For more information, visit better.lbl.gov or contact:

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Vist the open-source analytical engine: github.com/LBNL-ETA/BETTER_analytical_engine

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