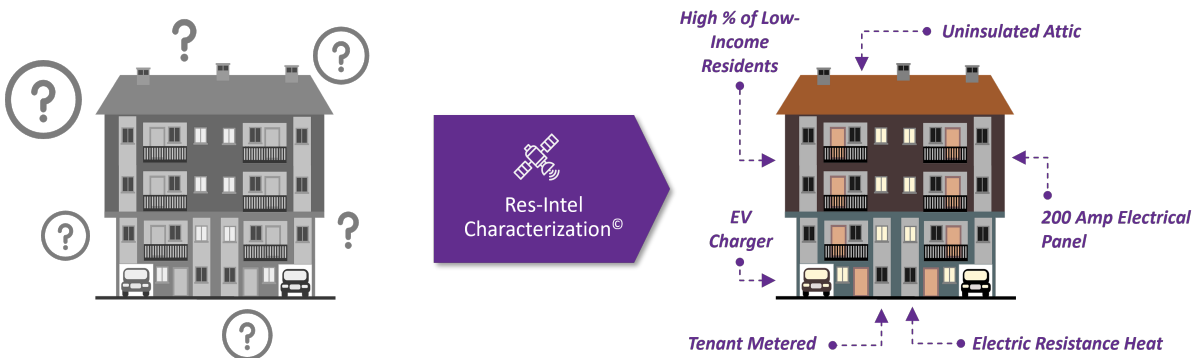


Benchmark.AI Residential Building Characterization

The Benchmark.AI™ toolset performs mass-scale benchmarking of residential buildings to help local governments and utilities optimize energy programs that lower energy burdens, protect the climate, and improve financial performance.



- Predictive benchmarking:** The Benchmark.AI engine predicts energy efficiency needs and makes custom demand-side management (DSM) recommendations for every residential property in your territory.
- AI-driven automation:** Innovative software audits thousands of properties quickly and remotely, giving energy usage patterns about all residential customers at a cost of pennies per property.
- Complete building inventory:** Benchmark.AI solves the incomplete data challenge by accumulating data from multiple sources, including real estate, OpenStreetMaps, county assessor, satellite imagery, GIS, and building footprint data.
- Building decarbonization potential:** Benchmark.AI's energy demand and end-use disaggregation provide bottom-up energy savings potentials from building electrification programs.
- Behavioral insights:** Sophisticated energy disaggregation and geocoding algorithms link up building data and community attributes to drive new insights on residential customer behavior.
- Comprehensive visualizations:** Software reporting that maps and visualizes customer information so you can interact with data and envision new programs.
- Impact monitoring:** Optional eBase module adds portfolio-wide DSM impact monitoring and evaluation in nearly real-time.

Complete Data and Analytics for Residential Energy Programs

Utility and government residential energy programs rely on property and building inventories for accurate and detailed assessments of opportunities for efficiency improvements. But the lack of a complete information source, especially for the multifamily sector, prohibits accurate inventories. The resources required to collect and analyze disparate datasets remains the biggest hurdle to energy efficiency programs, especially for the multifamily sector. Benchmark.AI collects all available data, creates the property and building inventories, and performs the analysis needed to plan and monitor energy efficiency programs effectively.

Need to meet regulatory program reporting requirements? Optimize program results? Reach underserved energy users? The Benchmark.AI toolset from Res-Intel can help.

Recommendations and Measurement for A Wide Range of Programs

The Benchmark.AI toolset generates energy disaggregation and customized DSM measure recommendations to improve many retrofit opportunities. These include decarbonization measures, weatherization including attic and wall insulation, lighting, space heating and cooling, and pool pumps and other measures.

Integrated Benchmark.AI Analysis and User-Friendly Dashboard



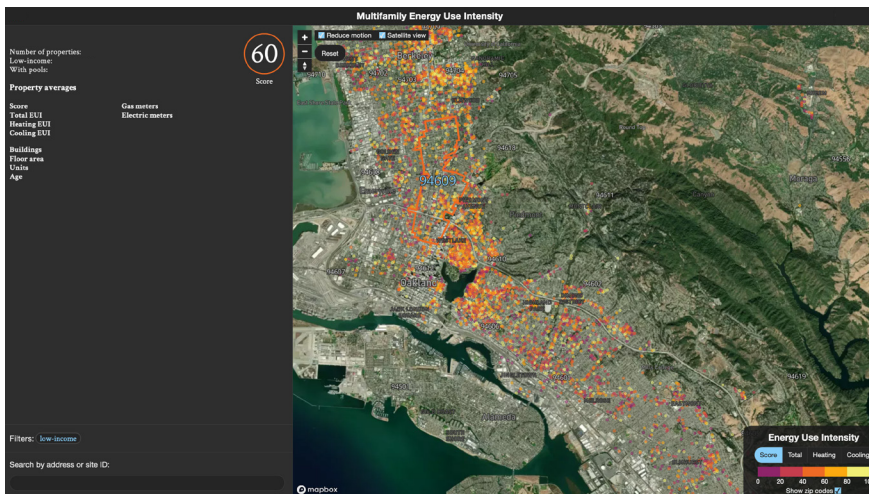
Step 1: Benchmark.AI creates a complete **residential property inventory** by accumulating data from an array of sources to identify and aggregate tax lot information into single- and multi-family complexes.



Step 2: It builds a **residential building inventory** using satellite imagery, building footprint, and Light Detection and Ranging (LiDAR) to identify occupied or unoccupied buildings.



Step 3: It completes **utility meter matching** by connecting service address and customer meter metadata onto residential and commercial property codes using sophisticated matching and geocoding algorithms.



Step 4: It performs **mass-scale building energy benchmarking** by assigning each property a building typology (such as low-rise, mid-rise, high-rise or garden style) and calculating each property's predicted energy use intensity (energy per square foot).

Step 5: It generates **data-driven DSM recommendations** based on each property's disaggregated energy usage.

[Learn more](#)

Learn more about Benchmark.AI and Res-Intel's solutions for multi-family residential (MFR) characterization and behavioral marketing programs.

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