FirstView®

nbi new buildings institute

Take a FirstView® of Your Building's Energy Performance

Most commercial building owners have little or no readily available feedback on energy performance. While utility bills may provide some general insight about energy consumption in most buildings, their ability to help target potential savings is limited. Other current tools either provide only general performance benchmarking or require extensive and detailed data input.

NBI's FirstView software tool uses basic information to quickly analyze building energy performance, helping owners and others track performance and identify areas to look for enhanced performance. Used in thousands of buildings, the FirstView tool's calculation engine generates meaningful feedback about how energy is being used in a building and the opportunities for improvement.

Like a prism breaks light into component parts, the FirstView tool separates data from monthly utility bills into end-use information in key areas.

How it Works

Using only information commonly collected to calculate an EUI, FirstView reveals underlying patterns in building end use consumption. It automatically allocates energy use to heating, cooling, thermal baseload, and electric baseload end uses - all without expensive sub-metering. This simple yet powerful way of looking at building energy data enables insights well beyond what is available from typical energy benchmarking tools.

The FirstView software engine performs an inverse energy analysis using multivariable regression algorithms to create a physics-based model of the building. Parameters of the building such as overall heat transfer coefficient or internal gains are estimated and used as building blocks to inform the simulation model. The building's weather-normalized energy performance is graphed and explained to help the user apply the model's results to improve building performance.

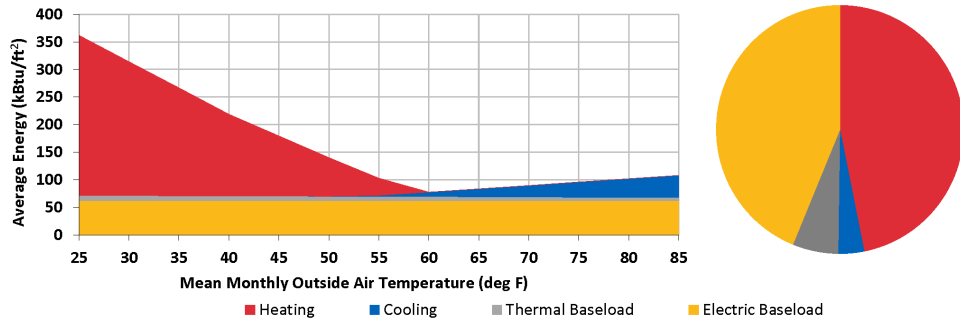### *How can NBI's FirstView software and services be used?*

Currently available benchmarking systems provide broad comparisons but don't suggest areas of improvement. FirstView directs attention to specific areas with likely potential for energy savings.

1. **Diagnostics** – Uncover patterns in building energy end-use characteristics and generate diagnostic reports about areas to investigate.

2. **Peer Building Benchmarks** – Compare building performance to other subsets of buildings or across portfolios.

3. **Design Model Predictions** – Compare expected results from an energy model to actual measured results.

4. **Trending** – Compare performance from year to year.

Diagnostics

Using our experience in building science research, NBI establishes thresholds in specific key performance areas. FirstView's diagnostics are automated comparisons of modeled building physical parameters. Flags can direct attention to particular areas that may be a concern before visiting the building. This helps improve the efficiency, effectiveness, and cost-effectiveness of energy audits.

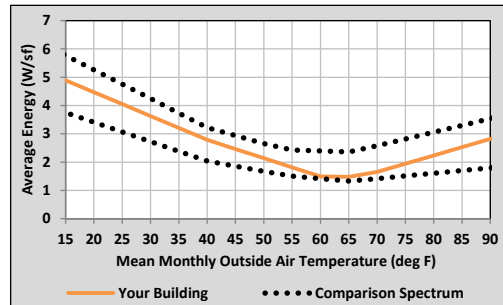### Consumption by End Use Energy Signature

This can also be especially helpful to those interested in evaluating a broad portfolio of buildings, quickly identifying high priority projects for further investigation.

Beyond Benchmarking

Comparing simple numbers is all well and good, but FirstView can show you how your building compares to its peers through the seasons. A comparison spectrum is created by analyzing dozens or hundreds of comparable buildings. Currently, comparison spectra are available for offices, multifamily buildings, K-12 schools, police stations, fire stations, libraries, and community centers. As a special service, NBI can also create a custom comparison spectrum for your building portfolio or geographical area.

Energy Signature Comparison

Who is Using the FirstView Software and Services?

FirstView has been used on thousands of buildings. Dozens of public building portfolio owners across the country, including state agencies, cities, counties, and school districts, have used FirstView to leverage basic benchmarking data to inform strategic energy plans. The USGBC used the tool to provide feedback on every commercial building in their Building Performance Partnership program. The Seattle 2030 District used the tool as a way to benchmark and track performance toward energy reduction goals in the district. Ecology Action (CA) and the Center for Energy and Environment (MN) each used FirstView to improve program delivery and provide M&V for their small commercial building retrofit programs.

For more information about FirstView, contact: info@newbuildings.org.

FirstView® is a trademark of New Buildings Institute. The tool and related products are operated under a joint agreement between NBI and Energy RM™.

FirstView allows you to invest audit resources where they will be most effective.

FirstView Automated Observations	
CATEGORY	**STATUS**
Heating & Ventilation	Poor
Cooling Efficiency	Good
Controls	No apparent problems
HVAC Reheat	No apparent problems
Thermal Baseload	High
Light/Plug Loads	High
External/Process Loads	High
Data Consistency	Orderly

New Buildings Institute

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