



nbi new buildings
institute

Multifamily Efficiency Solutions

Advanced Measures for Multifamily Projects

from NBI's Building Innovation Program



Multifamily: A Market Divided

The rapidly growing multifamily building sector represents a major opportunity to advance goals of improved energy performance, better indoor air quality, and more comfortable homes.

However, typical national model and local energy codes divide the multifamily market between the residential and commercial sections making it difficult to regulate efficiency standards. Low-Rise (3 or fewer stories) is regulated by the residential code and High-Rise (4 or more stories) is regulated by the commercial code.

Divided Market = Implementation Challenges

For energy efficiency program administrators, dueling codes create barriers to implementing effective and successful above-code energy efficiency programs across the range of building types in the multifamily market.

Implementing a single multifamily program can deliver inconsistent savings or neglect segments of the multifamily market.

Implementing separate programs for each segment of the multifamily market creates confusion, duplication of program expenses and branding challenges.



*Advanced measures described under **Multifamily Efficiency Solutions** save 15-25% over IECC-2015 or 20-30% over ASHRAE 90.1-2013.*

The **Multifamily Efficiency Solution's** prescriptive standard addresses all aspects of energy performance in multifamily buildings, including envelope, space conditioning, ventilation, site lighting, water heating and appliances. It also offers a single approach for the unique nature of the multifamily market and supports energy efficiency program administrators by:

- Simplifying program implementation
- Increasing multifamily energy savings
- Eliminating the need for costly energy modeling
- Encouraging program participation by multifamily owners and design teams

Multifamily Efficiency Solutions includes a comprehensive list of measures plus detailed guidance on four of the most pressing topics for multifamily buildings: domestic hot water, thermal bridging, ventilation and lighting.

- NBI analyzed over 50 measures and conducted a parametric energy modeling analysis on 30 measures to develop an integrated whole-building approach.
- Measures can be applied individually or as a whole-building bundle.
- Energy savings estimates from measures and bundles of measures can be customized for any climate zone or applicable code baseline.
- Measures deliver savings across all US climate zones and regardless of building height and whether the building is subject to residential or commercial code.
- Targets aspects under-represented in code, where market practices are significantly lagging best practices, or where technology advances have created design challenges.





The **Multifamily Efficiency Solutions** technical package includes:

- An Advanced Multifamily Standard with 13 core measures and six Additional Efficiency Packages
- An *Energy Savings Study* with predicted results from a parametric energy modeling analysis
- An *Incremental Cost Study* that estimates measure costs in various locations

In addition, market-facing guidance and educational resources help practitioners and owners more successfully apply the measures in multifamily new construction projects, and promotes efficiency program offerings in the market. These include:

- A market-facing *Multifamily Guide* with prescriptive details about each measure
- A complementary webinar series with customizable learning modules. Webinars come with AIA Continuing Education credit that can be leveraged to increase participation.



Learn more.

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More information at newbuildings.org/multifamily-new-construction-guide/

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