

NYIEC PRESENTATION #2

Title: Achieving maximum value with the Energy Modeling Process through Collaboration and Lessons Learned

The selection of energy modeling as an optional performance-based energy code compliance path was first introduced by the New York City Energy Conservation Code (NYCECC), Local Law 85 of 2009. The NYC Energy Code progressively tightened compliance requirements by restricting building energy simulations to strictly follow ASHRAE guidelines. The 2025 NYCECC has shifted energy modeling toward all-electric baselines, tightening envelope performance, and mandatory testing. Energy models must now incorporate limits on site fossil fuel use, exterior envelope thermal bridging calculations, and expanded efficiency credits. Air-tightness testing is now required across all building types, and energy models must now incorporate data driven envelope leakage allowances rather than default assumptions. Landmarked historic buildings can no longer receive automatic energy code compliance exemptions and must be modeled to receive special consideration and exemption approval.

Based on the design goals and performance metrics identified for a given project, energy modeling is an analytical and predictive based process that can be used to help determine the best hvac system and building envelope performance options to achieve target energy use and carbon emission reduction goals. Although modeling tools have improved over time, the stakes are higher as code becomes more stringent and the impact of not reaching goals is more significant, and the team engagement is needed. When implemented and managed properly, the involvement of the whole design team and owner allows for strategic leveraging of the collective experience of stakeholder allowing the energy modelling consultant to optimize the modeling process to achieve the goals and performance metrics identified for the project.



Speaker's Bio:

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Jim Dolan is the Principal in Charge of Commissioning and Energy Engineering Services for OLA Consulting Engineers. In this role, he oversees all energy audits, energy modeling, energy retrofits, high performance design, and commissioning projects for the firm. In the design and construction industry, Jim is recognized as an expert on high performance buildings and sustainable design, speaking frequently to professional and academic organizations throughout the region, including speaking engagements such as the ASHRAE National Meeting in New York, the New York Society of Professional Engineers Annual Conference, and at the Build Boston Conference for the Boston Society of Architects/AIA.

Education:

M.S. Mechanical Engineering

Manhattan University, Bronx, NY

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Certifications:

Building Commissioning Professional

Certified Energy Manager

LEED Accredited Professional

Trainer for ASHRAE 90.1 Energy Standard