

Calibrated Modeling – How Well Does My Building Perform?

Eveline Killian

Abstract:

Energy modeling during the design process is a valuable tool to determine the cost benefits of various building components. But these models are said to be 20 – 200% off from the actual energy consumption of the building! Calibrated modeling analyzes the building after it has been in operation for a few years.

Existing utility bills, digital control systems data and metering are used to calibrate the pre-construction model to the actual functionality of the building. By using the calibrated model, owners and designers can learn what affect energy-efficient measures really have on the building's performance, including variables such as interactive effects and the life-cycle costs over the life of the building. This information provides a valuable feedback loop that can direct future decisions on energy efficient building design as well as identify energy savings opportunities for existing measures not operating as intended. This seminar will discuss modeling software and real-life examples of existing buildings, their design model, the calibration process and how the calibrated model quantifies actual efficiency measure impacts.

Bio:

Eveline Killian

Eveline Killian, CEM, has 20 years' experience in Commercial and Industrial Project Management and 10 years experience as an Energy Analyst. As a project manager, Ms. Killian has worked closely with design firms, building owners, contractors and energy efficiency programs. Ms. Killian also has extensive experience in energy efficient building design and operation, efficiency program design and implementation, and measurement and verification of energy efficiency measures. She is a Certified Energy Manager and is experienced in mechanical and compressed air system efficiency and DDC control optimization.