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APPLICATIONS OF ENERGY MODELS FOR BUILDINGS

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ONLINE TRAINING BY KRISHNAJI PAWAR

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MODULE
L11

Communicating Building Energy Modeling Results

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APPLICATIONS OF ENERGY MODELS FOR BUILDINGS

ASHRAE provides guidelines and standards for communicating BEM results effectively and accurately. Effective communication aids stakeholders in making informed decisions regarding design choices, energy efficiency measures, and renewable energy investments. It facilitates regulatory compliance, performance verification, and stakeholder engagement.

Learning Objectives

- Introduction and Course Outline
- Simulation Comparisons
- Modeling Energy Performance
- Evolution of Simulation Techniques
- Baseline Building Models
- **Communicate Analysis Results**
- Collaborate Within Project Teams
- Applications of Energy Models for Building
- Case Study: Application of BEM
- Summary and Resources
- BEMP Practice Test V.5.1



INTRODUCTION

- BEM is crucial for designing and operating energy-efficient buildings.
- ASHRAE provides guidelines for effective communication of BEM results.
- ASHRAE Standard 209, "Energy Simulation Aided Design," provides a framework for BEM communication.
- Key components include clarity and transparency, use of visual aids, contextualization of results, comparison with benchmarking standards, and addressing uncertainties.
- Visual aids like graphs, pie charts, heat maps, and infographics aid in understanding thermal performance.
- Comparing BEM results against industry benchmarks validates model performance.
- Addressing uncertainties and risks in results presentation helps stakeholders understand potential risks.

COMMUNICATING BUILDING ENERGY MODELING RESULTS AS PER ASHRAE STANDARDS

- Building Energy Modeling (BEM) is crucial for energy-efficient building design and operation. ASHRAE provides guidelines for communicating BEM results effectively.
- Effective communication aids in decision-making, regulatory compliance, performance verification, and stakeholder engagement.



ASHRAE GUIDELINES FOR COMMUNICATING BEM RESULTS

- Clarity and Transparency: Use of graphic representations to convey complex data. Document assumptions, methodologies, and limitations of the model.
- Use of Visual Aids: Use of graphs, heat maps, and infographics to illustrate energy consumption trends and thermal performance.
- Contextualization of Results: BEM results should be contextualized within the framework of building performance goals and benchmarks.



ASHRAE GUIDELINES FOR COMMUNICATING BEM RESULTS +

- Comparison with Benchmarking Standards: ASHRAE provides various benchmarking standards for evaluating BEM results.
- Addressing Uncertainties and Risks: Discussion of uncertainties in the results presentation, such as weather conditions, occupancy patterns, and equipment performance.



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