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INTERPRETATIONS OF ENERGY

MODEL RESULTS

ONLINE PROFESSIONAL COURSES LED BY
THE WORLD'S TOP SPECIALISTS

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C), GSAS CGP, GCP, ISO 14001

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MODULE
L20

Summary and Resources

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Learning Objectives

- Introduction and Course Outline
- Verification and Fixing of Simulation Results
- Analyzing and Comparing Modeling Results
- Economic Analysis
- Sensitivity Analysis
- Exceptional calculation methods
- Building Energy Modeling Project Deliverables
- Interpreting Model Results
- Sample Energy Modeling Report
- Summary and Resources
- **BEMP Practice Test V.5.1**



INTRODUCTION

Energy Model Results Interpretations

- Energy model results are numerical outputs generated by simulation software.
- The interpretation process involves reality checks, software checks, parametric bracketting, data anomalies, load resolution, and hours outside control range.

Analyzing Simulation Outputs

- After checks and validations, simulation outputs are analyzed in relation to predefined targets.
- Comparative analysis is conducted to compare modeled energy consumption to energy use intensity targets.
- Utility rate structures and regulations are understood to understand how utility rates impact energy costs.

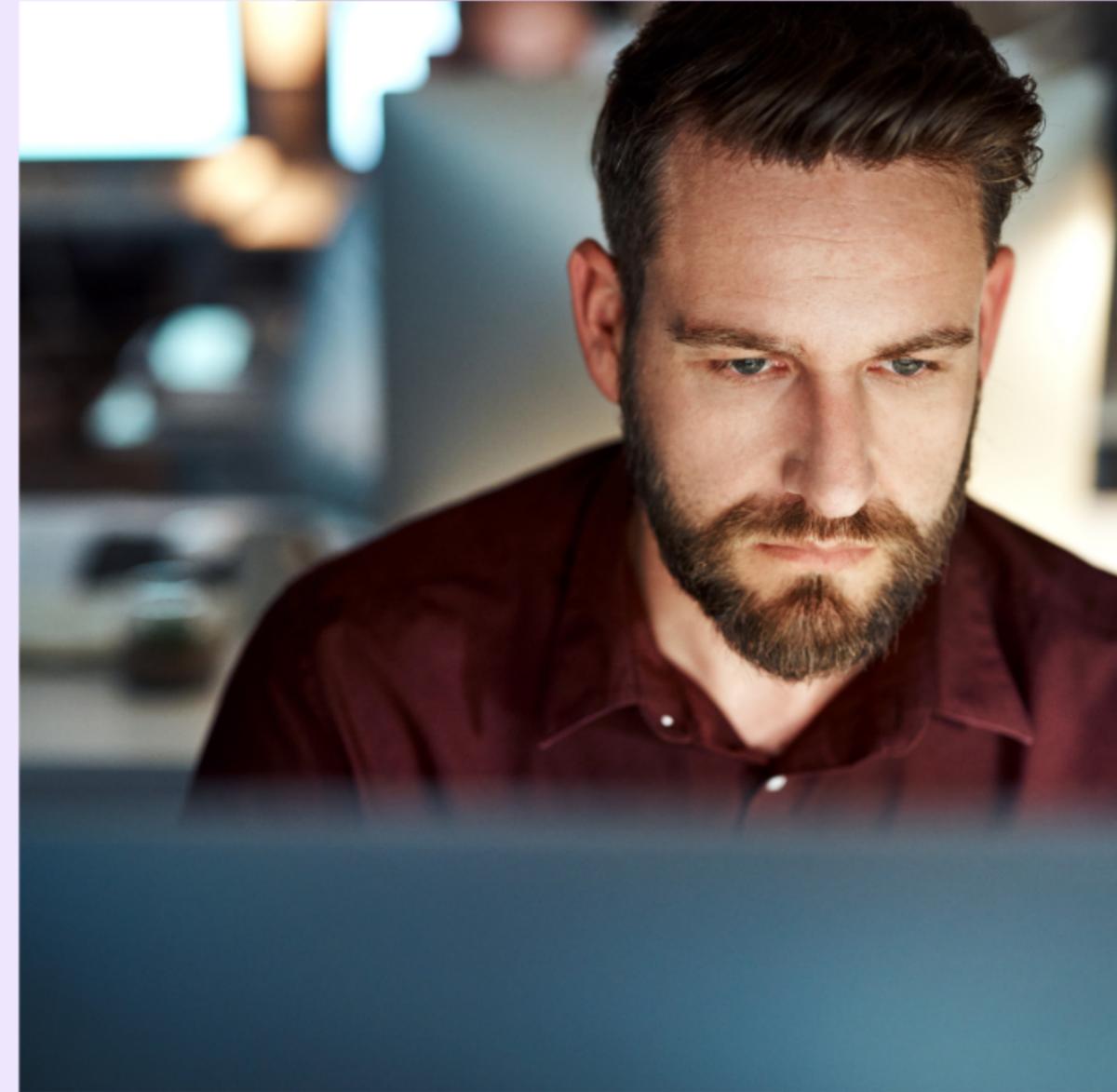
SUMMARY+

Performing Sensitivity Analysis

- Sensitivity analysis involves varying model inputs to understand their impact on energy performance outcomes.
- This practice helps identify which variables have the most significant effect on energy use and operational costs.

Exceptional Calculation Methods

- In some cases, standard calculation methods may not suffice, necessitating the application of exceptional calculations.
- These may include advanced computational fluid dynamics simulations or detailed thermal modeling for complex geometries.



SUMMARY+

Communicating Results and Documenting Findings

- Effective communication of energy model results is critical for stakeholder understanding and decision-making.
- Practitioners should provide clear visualizations, document methodologies, and explain findings in a manner accessible to non-technical stakeholders.

Sample Energy Modeling Report

- The report should include an Executive Summary, Modeling Methodology, Results and Analysis, Sensitivity Analysis, Recommendations, and Appendices.



SUMMARY+

Discussion on LEED Interpretations

- Understanding how energy modeling results align with LEED requirements is essential for achieving certification.
- Practitioners must be well-versed in LEED interpretative guidance to ensure their models support certification goals.



RESOURCES

- Performance-Based Building Design book | Hugo S. L. Hens | 2024
- Applied Building Physics book | Hugo S. L. Hens | 2016
- Occupant-Centric Simulation-Aided Building Design book | William O'Brien, Farhang Tahmasebi, William O'Brien, Farhang Tahmasebi | 2023
- Energy Simulation in Building Design book | Joseph Clarke | 2007
- Building Performance Analysis book | Pieter de Wilde | 2018
- Fundamentals of Building Performance Simulation book | Ian Beausoleil-Morrison | 2020
- Building Performance Simulation for Design and Operation book | Jan L.M. Hensen, Roberto Lamberts | 2019
- Energy Modeling in Architectural Design, Timothy L. Hemsath and Kaveh Alagheh Bandhosseini
- <https://www.energy.gov/eere/buildings/building-energy-modeling>
- <https://www.ashrae.org/professional-development/ashrae-certification/certification-types/bemp-building-energy-modeling-professional-certification>



BEYOND SMART CITIES BUILDING ENERGY MODELING PROFESSIONAL - BEMP EXAM QUESTION BANK

On-demand Learning Courses and Exam
Question Banks



Learning Objectives

- Learn Energy modeling abbreviations.
- Learn high-level energy simulation.
- Examine BUILDING ENERGY MODELING(BEM) in detail.
- Recognize strategies and make informed choices.
- Experience the ASHRAE BEMP exam.
- Know how to respond to circumstances.
- Consider the practice test part of your education.
- BEMP Exam: Flash Cards (One set of key terminology study flash cards. Over 108+ key terms!



Who can benefit?

- Building energy modeling and simulation professionals who want to earn Building Energy Modeling Professional (BEMP) credentials
- Building professionals who want to learn more about energy modeling terminologies and processes
- Individuals seeking a better understanding of HVAC, energy management, and building energy modeling
- For those who are starting their journey in the energy modeling profession.
- Architects, energy engineers, MEP professionals, energy engineers, and building designers

Benefits of our simulation exams

- Check your knowledge before the Building Energy Modeling Professional - BEMP Exam.
- 500+ questions in 5 simulated exams cover BEMP Exam Study Material.
- Learn the reasoning behind each question and answer and the related knowledge to review.
- The exam should be passed on the first try.
- Study Flashcards for the ASHRAE BEMP Exam





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Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.



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