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ENERGY MODELING SPECIALIST
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# FUNDAMENTALS OF URBAN BUILDING ENERGY MODELING

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 9

# Summary and Resources

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# Learning Objectives

- Introduction
- What is urban building energy modeling (UBEM)?
- Why is urban building energy modeling needed?
- What are the available UBEM tools?
- Urban modeling approaches
- How can local weather data be generated and used for UBEM?
- How can results from UBEM be calibrated?
- What are some examples of applications of UBEM?
- Summary and Resources
- UBEM Quiz_Test Your Knowledge!

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# SUMMARY

- Recently, urban building energy modeling has become an innovative method for identifying, supporting, and improving sustainable urban development and energy efficiency in cities.
- Building energy analysis in urban areas informs urban building energy models and suggests remedies.
- Researchers, urban designers, and regulators are increasingly interested in urban building energy models, leading to the creation of physical and hybrid models.

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# SUMMARY +

- Complex integrated urban energy planning considers energy flows into, through, and out of cities.
- The building stock contributes significantly to energy use and GHG emissions but also provides remarkable energy efficiency and integrated sustainable energy solutions.
- The need for urban integrated energy planning and the importance of buildings in city energy balancing have led to new city-scale building-oriented studies.
- City-scale energy modeling of buildings helps stakeholders, city planners, and decision-makers understand urban energy systems, create energy plans, propose sustainable initiatives, and develop good policies.
- However, due to buildings' interaction with surrounding buildings and the urban environment, their role in renewable resource envelope solutions, and their dynamic effects on district energy systems, building energy studies have been shifting from individual buildings to cluster and city-level solutions.




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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.

# RESOURCES

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