



BEYOND
SMART CITIES

wel come to

BEYOND SMART CITIES

BEYOND
SMART CITIES



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

LEARN.BEYONDSMARTCITIES.IN

BEYOND
SMART CITIES

MODULE
L19

Sample Energy Modeling Report

KRISHNAJI PAWAR - CEO & FOUNDER

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

WWW.BEYONDSMARTCITIES.IN



INTERPRETATIONS OF ENERGY MODEL RESULTS

Energy modeling is essential for predictive analysis, design optimization, regulatory compliance, and sustainability goals. It helps identify strategies to enhance energy efficiency, quantify energy savings, and meet sustainability benchmarks like LEED certification.

Learning Objectives

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



INTRODUCTION

- Energy modeling is a crucial tool for designing, evaluating, and optimizing building energy performance.
- It involves using software to simulate energy consumption based on architectural design, HVAC systems, occupancy patterns, and energy sources.
- It aids in predictive analysis, design optimization, regulatory compliance, and sustainability goals.
- A comprehensive energy modeling report includes several key sections: executive summary, project description, methodology, baseline conditions, energy consumption analysis, simulation results, energy conservation measures, and economic analysis.
- The conclusion synthesizes findings and presents actionable recommendations, such as installing a VAV system and high-performance glazing.
- Appendices may provide supplementary information.

ENERGY MODELING REPORT OVERVIEW

- Energy modeling is a crucial tool in designing, evaluating, and optimizing building energy performance.
- It involves using software to simulate energy consumption based on various parameters such as architectural design, HVAC systems, occupancy patterns, and energy sources.
- Energy modeling is essential for predictive analysis, design optimization, regulatory compliance, and sustainability goals.



STRUCTURE OF AN ENERGY MODELING REPORT

- Executive Summary: Presents a high-level overview of the study, summarizing key findings and recommendations.
- Project Description: Details the project scope, location, and purpose.
- Methodology: Outlines the approach taken in the energy modeling process, including the selection of software tools, input data, and assumptions.
- Baseline Conditions: Establishes a baseline for comparison, usually derived from standard reference buildings or existing conditions.



STRUCTURE OF AN ENERGY MODELING REPORT +

- Energy Consumption Analysis: Details the energy consumption predictions for different building systems.
- Simulation Results: Presents the results of the simulations, often illustrated through graphs and charts.
- Energy Conservation Measures (ECMs): Outlines strategies employed to enhance energy efficiency, detailing their anticipated impacts.





STRUCTURE OF AN ENERGY MODELING REPORT ++



- Economic Analysis: Evaluates the cost-effectiveness of the proposed energy conservation measures.
- Conclusion and Recommendations: Synthesizes findings and presents actionable recommendations.
- Appendices: Provides supplementary information such as detailed calculations, specifications of modeling software, and references to relevant standards.

ENERGY PERFORMANCE ANALYSIS



AERIAL PERSPECTIVE

PROPOSED WAREHOUSE CUM OFFICE FOR M/s WALLS & FLOORS



Prepared for:

M/s WALLS & FLOORS MIDDLE EAST FZCO
Plot No. S20905, JAFZA, DUBAI, UAE

November 23, 2021

BEYOND SMART CITIES

Techno Park, Sheikh Zayed Rd.,
P.O. Box 3816, Dubai, United Arab Emirates Tel: +971 4
XX000, Fax: +XXX4 8869001 info@beyondsmartcities.in
Website: www.beyondsmartcities.in

TABLE OF CONTENTS

EXECUTIVE SUMMARY	4
1. INTRODUCTION	5
2. METHODOLOGY	6
3. MODELING SIMULATIONS	6
3.1 Building Classification	6
3.2. Building Envelope (Base Case)	7
3.2.1 Building Envelope (Proposed)	7
3.3. High-Performance Glazing	7
3.4 Lighting (Base Case)	8
3.4.1 Lighting (Proposed)	8
3.5 HVAC (Base Case)	8
3.5.1 HVAC (Proposed)	9
3.6 EPD/Occupancy:	10
3.7 UTILITY COST	11
4. WHOLE BUILDING ENERGY PERFORMANCE RESULTS	11
5. CONCLUSIONS	16
6. APPENDIXES	17

APPENDIX A: BASECASE VISUAL DOE REPORTS

- ARCHITECTURAL DETAILS
- ARCHITECTURAL SUMMARY
- ZONE SUMMARY
- SYSTEM SUMMARY
- RESULTS

APPENDIX B: PROPOSED CASE VISUAL DOE REPORTS

- ARCHITECTURAL DETAILS
- ARCHITECTURAL SUMMARY
- ZONE SUMMARY
- SYSTEM SUMMARY
- RESULTS

B E Y O N D
S M A R T C I T I E S

CONTACT US



+91 6363032722



info@beyondsmartcities.in



learn.beyondsmartcities.in



#55,HMR Layout ,Bengaluru ,India

THANK YOU

