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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
L10

Calculate Financial Metrics

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INTERPRETATIONS OF ENERGY MODEL RESULTS

Key financial metrics in investment analysis include Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period. NPV measures the difference between the present value of cash inflows and outflows over a project's life, reflecting the profitability of an investment. IRR measures the efficiency of an investment, and Payback Period quantifies the time it takes for an investment to recover its initial cost through cash inflows.

Learning Objectives

- Introduction and Course Outline
- Verification and Fixing of Simulation Results
- Analyzing and Comparing Modeling Results
- **Economic Analysis : Calculate Financial Metrics**
- 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

- Life-cycle costing evaluates total cost of ownership over a building's life span.
- Investments in energy-efficient technologies may have higher upfront costs but can yield substantial savings over time.
- Key financial metrics include Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period.
- Incentives like tax credits, rebates, and grants can significantly affect financial metrics associated with energy-efficient investments.
- Integrating incentives into financial analysis can enhance feasibility of energy-efficient projects and encourage sustainable practices in the built environment.

UNDERSTANDING LIFE-CYCLE COSTING (LCC)

- LCC evaluates the total cost of ownership of a building over its life span.
- It includes initial capital costs, operational costs, maintenance expenses, and disposal costs.
- LCC posits that investments in energy-efficient technologies can yield substantial savings over time.





FINANCIAL METRICS IN INVESTMENT ANALYSIS



- NPV measures the difference between the present value of cash inflows and outflows over a project's life.
- IRR represents the discount rate at which the NPV of an investment equals zero.
- Payback Period quantifies the time it takes for an investment to recover its initial cost through cash inflows.

ROLE OF INCENTIVES IN BUILDING ENERGY MODELING

- Incentives can significantly affect the financial metrics associated with energy-efficient investments.
- Tax credits, rebates, and grants can reduce initial capital costs, improving NPV and IRR and shortening the payback period.



CONCLUSION

- Financial metrics are indispensable for evaluating the economic performance of energy-efficient investments in building design and construction.
- Integration of incentives into the financial analysis can significantly enhance the feasibility of energy-efficient projects.



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