The Critical Role of Building Energy Modeling in Reach Code Development

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Reach Code Overview

California Energy Codes and Standards

- **What is a Reach Code?**
  - Local amendments that exceed the minimum state code “Title 24”
  - Two types of Reach Codes: Prescriptive and Performance

- **Why Adopt a Reach Code?**
  - To meet a Climate Action Plan, Energy Plan, or other policy goals
  - Energy and Money savings

- **What is the Process for Adopting a Reach Code?**
  - Stakeholders Engagement, Cost-effectiveness, City Council Review, CEC Approval and filing with BSC

- **Why is BEM Important in a Reach Code?**
  - Informs quantitative trade-offs between up-front construction costs and operational energy costs

Example of Reach Code Project

2025 Nonresidential Alterations (AC to HP)

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Example of Reach Code Project:

2025 Nonresidential Alterations (AC to HP)

- **Scope**
  - Cost-effectiveness for Small Office & Medium Retail with Single Zone Air Conditioners (SZAC)

- **Purpose**
  - Identify where single-zone heat pump (SZHP) replacements are cost-effective
  - Evaluate cost-effective measure packages during HVAC replacements/alterations

- **Methodology**
  - Evaluate efficiency measures and packages
  - Use CBECC 2025 Software for BEM
  - Collect cost data for cost-effectiveness analysis
  - Create Reach Code pathway recommendation

BEM Software Supports REACH Code Development

- **Cost-effectiveness analysis on prototype models** for the development of energy codes and standards

  - CBECC Output: Hourly Results 8760
    - **On-Bill Cost-Effectiveness Approach**

  - CBECC Output: Annual Results
    - **Long-term Systemwide Cost (LSC) Cost-effectiveness Approach**

> ***Key Takeaway:***
>
> BEM enables Reach Codes to be data-driven, cost-effective, and performance-optimized—turning modeling insights into actionable local energy policy.

Thanks!

Q&A Session

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