The Role of Performance-Based Regulations, Design, and Energy Management in Building Renovation: A Pacific Tower Case Study

Presented by the Pacific Tower Team
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Panel Overview

Brief overview of Pacific Tower project and history - Dan McConnon

Financing and the owner’s perspective - Kristin Ryan

Performance-based codes - Duane Jonlin

Scope of the renovation and energy efficiency measures - Ash Awad

What it’s like to be a tenant of the PacTower, and how the Smart Building Center will engage the tenants for energy management - Stan Price
Brief overview of Pacific Tower project and history

Dan McConnon, Director, Office of State Efficiency and Environmental Performance, State of Washington
Financing and the owner’s perspective

Kristin Ryan, Partner, Barrientos + RYAN LLC
Modeled Performance

Actual Performance
1. Predict.
2. Prove.
3. Pay?
Pledge & Fine

- No upfront cost
- File “pledge” letter
- Burn it when you hit target
- Max fine $4/sf
Set good habits
TPP: The Lonely Code
The Future

“It’s tough to make predictions, especially about the future.” Yogi Berra
A Simple Recipe for Success?

A. Start with strong energy code
B. Design & construction enforcement
C. Thorough commissioning
D. Periodic tune-ups
E. Energy use disclosure
F. Keep it moving forward
Substantial Alterations and the TPP
Scope of the renovation and energy efficiency measures

Ash Awad, Chief Market Officer, McKinstry
Total Cost of Ownership

TOTAL COST OF OWNERSHIP FILTER

TCO ANALYSIS COMPONENTS

FINANCIAL
- First cost
- Operating cost
- Utility cost
- Social cost
- Capital replacement
- Hot/cold cost

O&M
- Ease of operations and maintenance

EUI
- Utility loads
- Sustainable features
TCO - Example

VAV Boxes VS Heat Pump

Building Envelope Upgrades VS Occupant Engagement Strategies
Operational Savings

Current State

Benchmark

GAP Analysis

Implementation Plan

Implementation/Execution

Optimized State
Tenant Engagement

Stan Price, Executive Director, Smart Buildings Center and Northwest Energy Efficiency Council
Smart Buildings Center

- High functioning venue for meetings, trainings, and events focused on improving the efficiency of commercial buildings
- Demonstration center to showcase how smart meets efficient
- Tool Lending Library offering a suite of loaned diagnostic tools to capture energy performance data
Energy Savings in Buildings

- Equipment
- Operations
- Occupants (could be tenants, employees, teachers, students)
Occupant Perspective

The building occupant’s perspective on energy consumption is not about energy per se, but the capabilities it provides for achieving job and mission goals.

Pacific Northwest National Lab, 2014
Which Occupants, What Behaviors?

- Building occupants – tenants or employees – affect building energy use

In doing their work, occupants affect total building energy use. Positive behavior change can improve energy efficiency.
QUESTIONS?