

Mind the Gaps: Post-Occupancy Discoveries from Data & Operational Perspectives

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NESEA NYC

Patrick Murphy, PE, LEED AP BD+C



Agenda

Introduction

What is Post-Occupancy Evaluation?

- **Value Proposition**
- **Process**

Case Studies

- Non-Profit: Parks & People
- Multifamily Residential: Radian

Wrap-Up / Recap

What is Post-Occupancy Evaluation (POE)?

- POE is a high-level evaluation of MEP system performance and overall occupant experience.
- The project team revisits the site 1-3 years after substantial occupancy.
- The project team issues a report summarizing findings and makes recommendations for improvement.



Value Proposition: Client

- Engages the design team during/beyond the warranty period
- Enhances owner understanding of their building and design intent
- Provides recommendations for improved operations
- Outlines corrective actions for issues



Value Proposition: Design Team

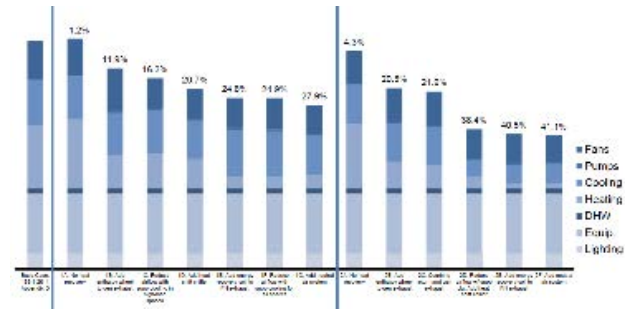
- Solicits candid feedback on building design, maintainability, and performance
- Analyzes real-life performance data to evaluate design decisions, lessons learned
- Follows up on commitments made by the project (EUI, IEQ metrics, etc.)
- Deepens the client relationship
- Opportunities to conduct energy audits and retrocommissioning



How is POE Different From...

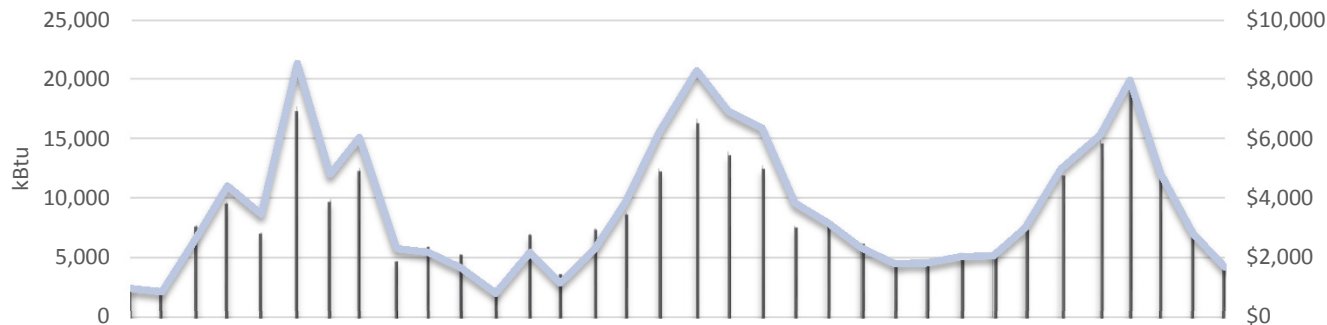
- ...M&V or an energy audit?
 - POE is not focused solely on energy consumption
 - POE does not include energy model calibration
- ...retro-commissioning?
 - POE occurs before retro-Cx
 - POE does not alter system operations

POE is a higher-level and shorter process than either of these activities.



POE Process

- Follow up with the owner 1-3 years after occupancy
- Outline POE process and value proposition
 - Send questionnaire
 - Request utility data
 - Schedule site visit
- Evaluate utility data, compare to energy model



POE Process

Questionnaire and Interviews

- Building controllability and complexity
- Equipment maintenance and warranty issues
- Energy performance
- Physical installation
- Project closeout & training
- Occupant comfort
- Overall occupant experience

Assessment Area	Score (out of 5)	Notes
General System Performance:	★★★★	
Building Controllability:	★★★	Controls issues stem from the user interface and the interaction between the master controls and the individual system control.
Energy Performance:	★★★	The Energy performance has not been calibrated with the model. However, the overall energy use is for the whole-building is tracking in line with the model.
Physical Installation:	★★★★	There have been few issues with actual installation. However, the water heater was placed in a way that has made the access to instantaneous hot water slightly limited. The hot water takes a few minutes to occur in the showers that are across the building.
Project Closeout:	★★★★	The building has been well maintained although the controls specialists have not been easy to be in contact with. A potential next step would be to work with BGE to determine whether lighting rebates are available.
Occupant Experience:	★★★★★	The occupants have been very satisfied with room-level thermal comfort, temperature control, and layout. The light/glare has been an issue occasionally but the shades can be drawn and tend to allay the problem.

POE Process

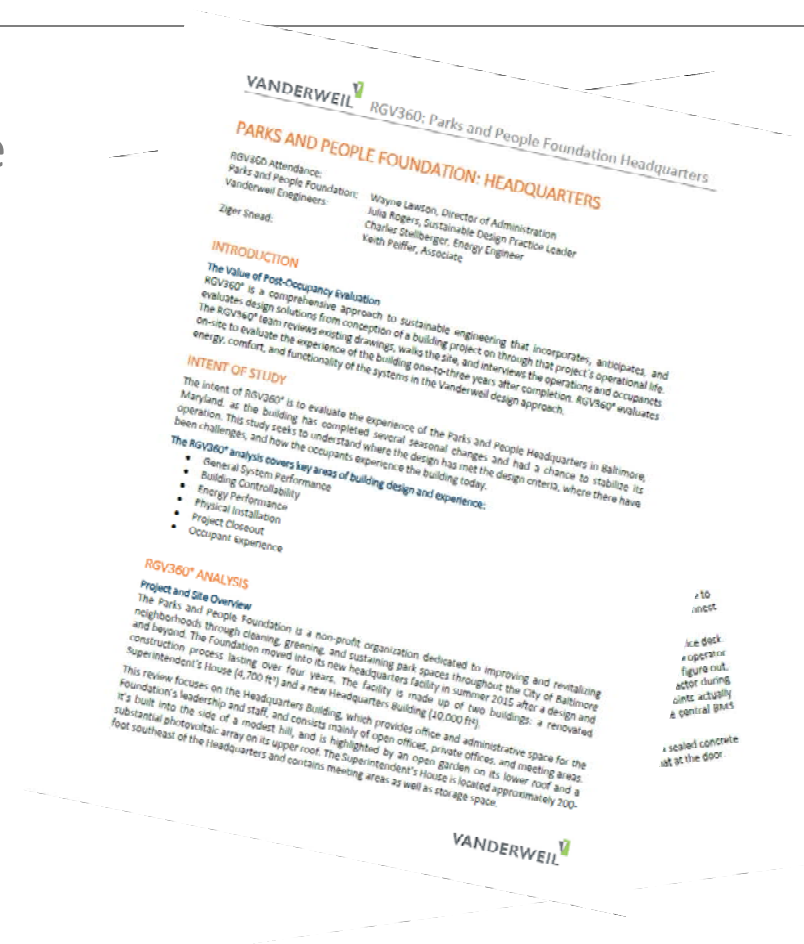
- Conduct site visit:
 - Interview owner and occupants
 - Interview facilities staff
 - Inspect the building systems
- Issue report with findings and corrective actions
- Follow up with owner to review findings and next steps



POE Process

Report and Follow-Up

- Document questionnaire and interview findings
- Provide analysis of energy performance vs.
 - Modeled design
 - Similar buildings (i.e. Benchmarking)
- Suggest corrective actions
- Review lessons learned
- Celebrate what went right!



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Case Study # 1

The Sally & Butch Michel Center for Parks and People
Baltimore, MD



Parks and People is a Baltimore non-profit which works to revitalize neighborhoods and communities through hands-on cleaning and greening of the natural environment.

Case Study # 1

Center for Parks and People



- Historic renovation of Park Superintendent House
- New construction of offices and community rooms



Headquarters building (10,000 SF)



Superintendent's building (4,700 SF)