

VALUE OF DEEP ENERGY RETROFIT OF BUILDINGS

Workshop

February 14, 2017, 9:00am - 5:00pm

National Academy of Sciences, Engineering, and Medicine
2101 Constitution Ave., N.W., Washington, DC, Room #125

Overview: The goal of this workshop is to develop a solid accounting concept for the benefits of deep energy retrofit projects, going beyond energy and water usage reductions. Public and private sector stakeholders will collectively identify and discuss attributes of government owned real estate that are a result of building modernization efforts.

Pre-meeting survey:

https://docs.google.com/forms/d/e/1FAIpQLSfG-nfNMnBwr_p1g6UVkWCjRyuXKcut7xU14kHH9WStLCcCSQ/viewform

8:30am	Registration & Coffee
9:00am	Welcome – Cameron Oskvig, Kinga Porst Hydras
9:15am	Roundtable Introductions
9:30am	Opening Remarks, Kevin Kampschroer, GSA
9:45am	Overview of Deep Energy Retrofits, Kinga Porst Hydras
10:00am	Coffee Break

Workshop I: Setting the Current State for Life Cycle Decision Making

10:15am - 11:45am – Lead: Nick Hufford, GSA

Objective: The purpose of this session is to capture meaningful outcome values for life cycle decision-making.

Discussion:

1. Describe Net Present Value (NPV) methodologies in use by the government (around the room)
 - o GSA, State, Navy, Army, HUD, Others

Questions to ask:

1. What are the similarities and differences of methodologies presented?
2. Can we define the outcome parameters that could affect change in investments and the units of measurement for comparability?
3. What are the possible real estate outcomes (e.g. vacancy, rental/sales, water, energy, O&M, resilience)?
4. What are the possible organizational outcomes (e.g. attraction/retention, absenteeism, health (specifics), productivity (specifics))?
5. What are some linkages between real estate values and human values?

Lunch at NAS Cafeteria

11:45am - 12:30pm

Workshop II: What Are Attributes We Can Account For?

12:30pm - 2:00pm – Lead: Alexander Zhihov, US Army, Cindy Zhu, DOE

Objective: *The purpose of this session is to define how we identify 5 star buildings – define the stars collectively.*

Presentation #1: Value of Deep Energy Retrofits (ASHRAE paper) and Case Studies

Alexander Zhihov, US Army ERDC, (15 minutes)

Presentation #2: DOE Building Technologies Office (BTO) Asset Scoring

Harry Bergman, DOE (15 min)

Presentation #3: Valuing Energy Efficiency

John Scott, Collier, (15 minutes)

Presentation #4: GSA High Performance Building Portfolio Overview

Fred Winter and Sonya Reinhardt, PwC, (10 minutes)

Discussion:

1. Pre-Workshop Survey Results
2. Define the IEQ parameters that are demonstrated to achieve real estate value, higher productivity and health, as well as user satisfaction. Including capturing the known mechanisms that link IEQ to outcomes. Which variables are strongly linked to energy?
3. Define the technical attributes of building systems for better IEQ that are demonstrated to achieve real estate value, higher productivity and health, as well as user satisfaction. (including critical LEED/Bream/WELL credits).

Break

2:00pm - 2:15pm

Workshop III: Where Are We Going?

2:15pm - 3:45pm – Lead: Vivien Loftness, Carnegie Mellon University

Objective: *The purpose of this session is to set lifecycle cost analysis (LCCA) or the Triple Bottom Line (TBL) accounting principles to value real estate with deep energy and IEQ retrofits.*

Discussion:

1. Define the TBL accounting methodology to justify investments in the '40' technical attributes or the '40' IEQ metrics. What is needed to make this a norm: a MOU? Training? Baseline data base on human costs?
2. Define the research that will prove the life cycle value of deep energy retrofits
3. Demonstrating the TBL methodology on a side by side retrofit project
4. Adding to the evidence on outcomes impacted
5. Discussion around the Federal Ruling – NIST and DOE FEMP

Break

3:45pm - 4:00pm

Workshop Summary and Closing Remarks

4:00pm - Lead: PwC

Objective: *Summarize workshop outcomes, generate a common understanding for LCCA to help inform future rulings; discuss follow up items.*

Closing Remarks: Kinga Porst, Alexander Zhihov

List of attendees:

Harry Bergman	DOE BTO
Tony Burt	DoD Navy
Steve Emmerich	NIST
Jason Hartke	DOE BTO
Kathryn Haught	DoD
Christian Hazen	GSA
Andrew Heller	GSA
Nick Hufford	GSA
Kinga Porst Hydras	GSA
Kevin Kampschroer	GSA
Bob Koffman	Real Property Accountability and Audit Readiness OASD (EI&E)
Vivien Loftness	Carnegie Mellon University
Walter Ludwig	Office of the Assistant Secretary of Defense, Energy, Installations & Environment Installation Energy (IE)"
Donna McIntire-Byrd	U.S. Department of State
Doug Miller	RMI
Leslie Nicholls	DOE FEMP
Joshua Noonan	HUD
Wayne Nygard	U.S. Department of State
Cameron Oskvig	Federal Facilities Council, NAS
Brendan Owens	USGBC
Miriam Ray	DoD Army
Sonya Reinhardt	PWC
Tim Runde	
John Scott	Colliers
Randy Shed	DoD
John Shonder	DOE
Nathan Smith	GSA Public Buildings Service
Robert Spoo	DoD
Susan Wachter	University of Pennsylvania, The Wharton School
Fred Winter	PWC
Theiddi Wright Chappell	Sustainable Values, Inc.
Alexander Zhihov	US Army ERDC
Cindy Zhu	DOE

"We know the price of everything and the value of nothing....." - Oscar Wilde, Picture of Dorian Gray (1890)