

## Getting To Zero

AIA SEATTLE | FALL 2014- WINTER 2015 | SEATTLE CITY HALL, BERTHA KNIGHT LANDES ROOM

*\* all sessions/speakers subject to change*

PROGRAM: FRIDAY, FEBRUARY 6, 2015\*

### GETTING TO ZERO, SESSION #4: LONG-TERM OPERATIONS FOR NET ZERO ENERGY BUILDINGS

8.30-9.00 am **REGISTRATION** and Continental breakfast

9.00-9.15 **WELCOME: Long Term Operations for Net-Zero Energy**

**Heather Burpee** | Health Design Specialist and Research Assistant Professor, University of Washington, Integrated Design Lab

9.15-10.30 **Owner's Perspective, The Edith Green-Wendell Wyatt Project Team**

**Patrick Brunner** | Project Executive and Contracting Officer, U.S. General Services Administration (GSA)

**Lisa Petterson** | Associate Principal and Director, Sustainability Resources, SERA Architects

**Matthew Braun** | Balfour Beatty, Project Executive

*The Edith Green-Wendell Wyatt project team, consisting of the owner (GSA), A-E (SERA Architects), and builder (Howard S. Wright) team will share: The regulatory history for energy conservation requirements included in the project; How those requirements were translated into scope, and reconciled with existing/outdated mandates; and the decision process for clarifying owner objectives; Additionally, this session will include the science and studies that influence and impacted conservation objectives, the design process, and subcontractors delivering that scope; Building features and distinctions; How the delivery method (IDP-like) influenced or enhanced conservation requirements or sustainability features, as well as how it affected contract roles and responsibilities; and, Challenges energy generation (PV) caused utility providers.*

10.30-11.00 **Indoor Light and Circadian Functioning: Can Daylight be a Health Benefit?**

**Judith Heerwagen**, Ph.D. J.H. | Program Expert, U.S. General Services Administration (GSA) Office of High Performance Green Buildings Program

11.00-11.15 BREAK

11.15-12.00 **Metered Energy Efficiency: Monetizing the Energy Benefits of Net Zero**

**Rob Harmon** | President and CEO, EnergyRM

12.00-12.30 **Policy and Regulation**

**Mark Frankel** | Technical Director, New Buildings Institute

12.30-1.00 pm **Wrap Up**

**Joel Loveland** | Director, University of Washington, Integrated Design Lab

#### SESSION #4 MODERATOR:



**Heather Burpee** is a Research Assistant Professor of the Department of Architecture at the University of Washington and serves as the Health Design Specialist at the Integrated Design Lab | Seattle (IDL). Ms. Burpee received a B.A. in Biology from Whitman College, and an M. Arch from the University of Washington. As part of her work with the IDL, Ms. Burpee has established thorough research on energy efficiency of hospitals working with leading architects and mechanical engineers to establish goals to radically reduce energy consumption in this building typology, while maintaining high quality healing and work environments. This work bridges practice, research, and education with collaboration between practitioners, faculty, and students. Ms. Burpee has traveled extensively in Northern Europe studying innovative design and its applicability to design practice in the United States. This research included collaboration with leading experts in sustainability in Stockholm, Sweden and several international architecture and mechanical engineering firms in Scandinavia.

#### SESSION #4 SPEAKERS:



**Patrick Brunner** is a Project Executive and Contracting Officer for U.S. General Services Administration (GSA)'s Northwest Arctic Region (10). Pat's been a Federal Contracting Officer for 34 years including "tours" with the Air Force, DCAS, DCMA, Defense Commissary Agency and the EPA. Contracting assignments have ranged from small dollar supply orders (pencils) to billion dollar weapon systems. Mr. Brunner recently finished GSA's Edith Green/Wendell Wyatt (EG-WW) Modernization. Mr. Brunner has been Region 10's subject matter expert for "collaborative delivery" testing various forms on 4 major capital projects (Eugene Courthouse; Nakamura Courthouse Renovation; Peace Arch Border Station) to include a modified form of Integrated Delivery on the EG-WW project.



**Lisa Petterson, AIA**, LEED AP BD+C, LC, NCARB, is Associate Principal and Director, Sustainability Resources, at SERA Architects, Inc. For the past 25 years, Ms. Petterson has focused her work on the development of green building projects, with a focus on lighting and daylighting. At SERA since 2002, she is the Co-founder and Director of SERA's Sustainability Resources Group (SuRG). Her leadership in integrated design and incorporating sustainability at the earliest stage of projects has been instrumental in making SERA a leader in sustainable design. Ms. Petterson's dual role as a project architect focused on "deep green" design and as a daylighting/sustainable design specialist, gives her a unique insight into the importance that proper architectural design plays in good daylighting and how design affects light quality. She is familiar with the research supporting the use of daylight to improve worker productivity and to enhance learning, and speaks nationally on the topic. Her current work on net-zero energy buildings has led her to develop climate metrics and early design tools to more deeply integrate data-driven design into SERA's work. Ms. Petterson served as the technical lead for both Edith Green Wendell Wyatt Federal Building and the Oregon Sustainability Center as well as serving as the project designer for the Kenton Living Building & the living office.



**Matthew Braun, PE**, is a native of the Pacific Northwest and is Project Executive for Balfour Beatty. He administrates the Mechanical/Plumbing/Electrical contracts, contractual compliance requirements with the GSA, and project initiatives such as Smart Buildings. He is a licensed Professional Engineer whose experience spans telecommunications, cogeneration and combined heat and power, hospitals, civic buildings, schools, high tech, and high rise office buildings. Mr. Braun has worked on projects from NYC to Seattle and from Anchorage to San Diego. His long term interests lie in high efficiency energy production and consumption and sustainable design/construction practices.



**Judith Heerwagen, Ph.D. J.H.**, is a Program Expert at the U.S. General Services Administration (GSA). Dr. Heerwagen is an environmental and evolutionary psychologist whose work focuses on the links between building design and human health, well-being, and productivity. Prior to starting her own business, Dr. Heerwagen was a senior research scientist at the Pacific Northwest National Laboratory and a research faculty member at the University of Washington, College of Architecture and Urban Planning. She has lectured widely on sustainability and bio-centric design and has co-edited a book on

Biophilic Design: Theory, Research and Practice published by John Wiley in 2007. She is the author or coauthor of numerous other articles and book chapters on workplace productivity, biophilia, and habitability. She has conducted numerous post occupancy evaluations of sustainable buildings, including the Philip Merrill Environmental Center in Annapolis, the Herman Miller Greenhouse, and Seattle City Hall. In 2005 she was selected as an “environmental champion” by the American Society of Interior Designers.



**Rob Harmon** is President and CEO of EnergyRM, and drives the Company’s work in the collaborative roll-out of Metered Energy Efficiency trials with selected utilities in the U.S. Mr. Harmon served for 10 years as Chief Innovation Officer and Senior Vice President for the Bonneville Environmental Foundation, where he developed and launched the first carbon calculator on the Internet and closed the first retail REC (Green Tag) transaction in the U.S. That work laid the foundations of today’s “green power” offerings throughout the utility world. In 2004, Mr. Harmon was awarded the national Green Power Pioneer Award for his leadership in establishing the retail renewable energy certificate market, and for his ongoing efforts to ensure a thriving and credible voluntary market in the U.S. In 2009 Mr. Harmon created and launched Bonneville Environmental Foundation’s Water Restoration Certificate business line, which utilizes voluntary markets to restore critically de-watered ecosystems. This business is the subject of Mr. Harmon’s 2010 TED Talk.



**Mark Frankel, AIA, LEED AP**, is the Technical Director for the New Buildings Institute. NBI develops programs, policy, training, and research on high performance buildings and energy efficiency for organizations all over the country. Currently Mr. Frankel is involved in national coalitions to improve building performance feedback, market adoption strategies for net zero energy buildings and deep energy retrofits, and in the development and implementation of innovative codes and programs focused on building performance outcome and benchmarking. Mr. Frankel has been consulting on energy efficiency and sustainable design for over 20 years.

His work in this period has encompassed a broad range of technical topics, including lighting and daylighting, passive and high performance mechanical systems, commissioning, energy modeling, and site design, IAQ, stormwater management, water efficiency, and others. Mr. Frankel has consulted on hundreds of capital projects, ranging in scale from single and multi-family residential projects to large commercial buildings and portfolio strategies. He also has extensive experience with the USGBC’s LEED program, both as consultant to projects successfully targeting LEED, and as a technical consultant to the USGBC on the LEED program. Mr. Frankel currently serves on the Boards of the USGBC and the Seattle 2030 District. He is a LEED Fellow and a licensed architect.



**Joel Loveland** is the Director of the Integrated Design Lab, in collaboration with the Department of Architecture at the University of Washington. Joel has delivered the daylighting consulting on over 150 projects per year across the states of Washington, Oregon, Idaho, and Montana as well as the province of British Columbia. Professor Loveland continues to travel widely, consulting on projects throughout the lab’s territory as well as lecturing and teaching nationwide. In this effort, he is revisiting the major cities of the region to report on the lab’s recent daylighting work, renewing acquaintances made at Daylighting Consultant Seminars and looking for the best way to expand and support the

“Daylighting Network” of professionals throughout the Pacific Northwest.

## WHAT ELSE IS HAPPENING AT AIA SEATTLE?

[Diverse Work/s in Design at Perkins+Will.](#) February 10, 5:30-7pm. Presented by Diversity Roundtable.

[Call for Submissions: Center for Emerging Professionals Annual Exhibition.](#) Submit by February 17.

[3form LightArt Studio Tour.](#) February 19, 4-5:30pm @ LightArt's facility, 4770 Ohio Ave S. Presented by Young Architects Forum.

[Women in Design Book Salon:](#) *Women in Clothes*. February 26, 7:30pm @ Victrola Coffee, 411 15th Avenue E.

[Call for Submissions: AIA Seattle + Seattle magazine Home of Distinction.](#) Submit by February 25 at 5pm.

[Beyond Codes: The Dirty Dozen Compliance Issues for the Fair Housing Act.](#) March 25, 8:30am - 12:30pm.

[2015 AIA National Photography Competition for Architects.](#) Submit by April 1.

[2015 AIA National Convention](#) with keynote speaker Bill Clinton. May 14-16 in Atlanta.