aia seattle

Getting To Zero

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

** all sessions/speakers subject to change*

PROGRAM: FRIDAY, DECEMBER 5, 2014*

GETTING TO ZERO, SESSION #2: INTEGRATED DESIGN AND PROCESS FOR NET ZERO ENERGY BUILDINGS

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

9.00-9.30 **WELCOME: Introduction to Integrated Energy Design**
Designing for Net Zero Energy: An Overview of Integrated Energy Design
Michael Hatten, P.E. | SOLARC
Integrated design has a multiplicity of definitions still largely dependent upon the designer and the project. In an overview introduction to Session 2, those definitions will be reviewed and the most relevant explored for design content and process implications. Connections will be made with the AIA +2030 series content, though an emphasis on strict energy outcomes rather than implied carbon outcomes will be developed as an overview theme. Performance testing of an emergent design is a key element for the most robust definitions of integrated design. For net zero energy projects, energy performance testing becomes critical both for the use patterns of the building and the output capacity of the onsite renewable energy system. The implications of such testing will be highlighted as a driver of both content and process for net zero energy designs.

9.30-11.25 **Integrated Design Process: The Design Team's Perspective**
Justin Stenkamp, PE, LEED AP | PAE Consulting Engineers
Margaret Sprug, AIA | The Miller Hull Partnership
Jim Hanford, AIA, LEED AP BD+C | The Miller Hull Partnership
Design and construction of net zero energy buildings require a more integrated design approach than typical new building projects. Team development from the outset, early research and energy modeling, and continual evaluation of project costs are critical to the design effort. In later design stages and in construction, enhanced quality control and more integrated commissioning are required. Planning for occupancy during the design and understanding that systems may need tweaking once construction is underway is also important to the success of a net zero project. This presentation covers specific design strategies in addition to process-oriented concepts along a timeline that ranges from project initiation to post-occupancy. The presenters draw upon their experience designing the Bullitt Center (on track to become the world's largest commercial Living Building) and other projects with similar aggressive energy goals.

11.25-11.55 BREAK

12.00-1.00 pm **Integrated Design for Net Zero Energy Case Study: Rice Fergus Miller Office Building**
Greg Belding, LEED AP | Rice Fergus Miller, Inc.
In 2011 Rice Fergus Miller completely renovated a former Sears Auto Center, transforming it into its new office and studio – in the process this 30,000 square foot abandoned 1940's building in Bremerton, WA became the most energy efficient commercial office building in the Pacific Northwest, and became a model for how to achieve high performance, sustainable design solutions in a changing economic climate.

Using this project as a case study, this presentation will explore how the architectural and engineering design team engaged owners, contactors, occupants, and financing institutions to expand the idea of integrated design; and how this expanded concept of the design team – guided by six sustainability goals

identified at the project's outset – was able to deliver zero net energy performance, LEED Platinum certification, and transform an office culture at a market rate construction cost ($105/square foot).

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GETTING TO ZERO, SESSION #3: BUILDING AND OPERATING NET ZERO ENERGY BUILDINGS

8.30-9.00 am	**REGISTRATION** and Continental breakfast
9.00-9.30	**WELCOME: Building and Operating Net-Zero Energy Buildings** **Joel Loveland** | University of Washington, Integrated Design Lab
9.30-10.30	**Building and Operating Net-Zero Energy Buildings & Owner and Occupant Engagement, Leasing and Owning Process** **Casey Schuchart** | Schuchart Construction **Chris Faul** | Point32 **Angela Faul** |ACJK Consulting
10.30-11.00	BREAK
11.00-11.30	**The Net Zero Certification Program** **Amanda Sturgeon** | International Living Future Institute
11.30-1.00 pm	**Design/Construction/Hand-off to Ownership** **Jack Avery** | Sellen Construction **Tom Marseille** | WSP

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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 | University of Washington, Integrated Design Lab

9.15-10.00 **Owner's Perspective, Edith Green Team**
Patrick Brunner | U.S. General Services Administration (GSA)
Lisa Petterson | SERA Architects
Matthew Braun | Howard S. Wright
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.

10.00-10.45 **Occupant Productivity and Behavior Change**
Judith Heerwagen | U.S. General Services Administration (GSA)

10.45-11.00 BREAK

11.00-11.45 **Monetizing Energy Efficiency Benefits Over 20 Years**
Rob Harmon | EnergyRM

11.45-12.30 **Policy and Regulation**
Mark Frankel | New Buildings Institute

12.30-1.00 pm **Wrap Up**
Joel Loveland | University of Washington / Integrated Design Lab