## Thursday Schedule

**WORKSHOPS**

**Grand Ballroom**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:00-11:00</td>
<td><strong>A: ENERGY MODELING</strong></td>
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<tr>
<td>11:00-12:00</td>
<td><strong>CHECK-IN</strong></td>
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**Library**

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<tr>
<td>12:00-13:00</td>
<td><strong>LUNCH &amp; KEYNOTE: KATHIE DELLO</strong></td>
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<tr>
<td>13:15-14:00</td>
<td><strong>SESSION 1</strong></td>
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<tr>
<td>14:00-15:00</td>
<td><strong>SESSION 2</strong></td>
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<tr>
<td>15:15-16:00</td>
<td><strong>WORKSHOPS</strong></td>
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<tr>
<td>16:15-17:00</td>
<td><strong>CLOSING REMARKS IN BALLROOM</strong></td>
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<tr>
<td>17:00-18:30</td>
<td><strong>RECEPTION</strong></td>
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<tr>
<td>18:30-20:30</td>
<td><strong>SPECIAL DINNER &amp; KEYNOTE: ASTRONAUT MICHAEL LOPEZ-ALEGRIA</strong></td>
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**Lunch & Keynote: Kathie Dello**

Kathie Dello is the Associate Director of the Oregon Climate Change Research Institute and the Deputy Director of the Oregon Climate Service. She will speak to how Climate Change is already affecting our region and how the Pacific Northwest can prepare for impacts on our natural resources, infrastructure systems, health and quality of life.

**Close Remarks in Ballroom**

**SPECIAL DINNER & KEYNOTE: Astronaut Michael Lopez-Alegria**

Astronaut Michael Lopez-Alegria held the record for the longest spaceflight at 215 days and he has spent more time spacewalking than any American. Hear about what parts of being in the space program are transferable to our daily lives and get a personal perspective of our planet that very few people have ever seen.

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**CHECK-IN**

11:00-12:00

**Snacks Served in Trade Show Room**

**NEW: Passengers in the Air: Designing Affordable Housing in the Urban Airshed**

**Workshop Panel: What to Do with All Those Crappy Old Buildings?**

- Christy Love, Portland Community College
- Scott Kosmecki, Portland Community College
- Josh Salinger, Portland Community College

**New Studs or New Glass? The Case for Affordable Housing in the Urban Airshed**

- Rebecca Sorensen, Portland Community College
- Joanne Jardine, Portland Community College
- Daniel Chang, Portland Community College

**NEW: Attack the Carbon Footprint of Every Project**

- Stacy Smedley, University of Oregon
- David Mead, University of Oregon
- Thomas Schaer, University of Oregon

**NEW: Collective Impact: Pushing Policy to Reach Zero Energy & Zero Carbon Goals in the Northwest, Hosted by Earth Advantage**

- Anthony Roy, Earth Advantage
- Amy Cortese, Earth Advantage
- Vinh Mason, Earth Advantage
- Amy Wheeless, Earth Advantage
- Zach Semke, Earth Advantage

**NEW: Avoid the Carbon Rebound: How Passive House Can Create Higher-Carbon Buildings Than Conventional Methods**

- Lucas Johnson, Passive House Oregon

**NEW: Building as a Conscious Act: Finding Opportunity in Health, Resiliency and Community**

- Eric Corey Freed, UrbanBuilt

**NEW: Collective Impact: Pushing Policy to Reach Zero Energy & Zero Carbon Goals in the Northwest, Hosted by Earth Advantage**

- Anthony Roy, Earth Advantage
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**NEW: What to Do with All Those Crappy Old Buildings?**

- Christy Love, Portland Community College
- Scott Kosmecki, Portland Community College
- Josh Salinger, Portland Community College

**NEW: NEW Studs or New Glass? The Case for Affordable Housing in the Urban Airshed**

- Rebecca Sorensen, Portland Community College
- Joanne Jardine, Portland Community College
- Daniel Chang, Portland Community College

**NEW: Quantifying the Carbon Footprint of Every Project**

- Stacy Smedley, University of Oregon
- David Mead, University of Oregon
- Thomas Schaer, University of Oregon

**NEW: Envelope Workshop**

- Scott Kosmecki & Josh Salinger

**NEW: Accelerating Energy Efficiency in Oregon's Built Environment**

- The Oregon Department of Energy

**NEW: Charter Telecom Headquarters Building**

- Graeme Verhulst

**NEW: Passive House in Very Cold Climates**

- Andrea Frisque, Jeanne Chan & Sergio Sadaba of Stantec

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**Join the Conversation**

#PHnw10 / #BuildingBeyondZero
# Friday Schedule

**A: ENERGY MODELING**  
Grand Ballroom  

**B: BUILDER TRAINING**  
Library  

**C: POLICY**  
Billiard Room  

**D: MECHANICAL / CASE STUDIES**  
Card Room

## BREAKFAST & KEYNOTE: 10 YEAR RETROSPECTIVE

- Introducing the new PHPP Expert Seal  
  Andrew Peel  
- Verified Successful Airtightness Approaches in the US and PNW  
  Dan Whitmore  
- Oregon Global Warming Commission Report & Clean Energy Jobs Bill  
  Sam Purdue, Lesley Jantarasami  
- Educating the Next Generation  
  Alison C. Kwok  
- Indoor Air Quality and HVAC Strategies for High Performance  
  Healthy Homes  
  Greg Davenport & Luke Howard

## LUNCH & KEYNOTE: CARLY COULSON

- The Architect's PHPP Dashboard  
  Dylan Lamar & Skylar Swinford  
  Maren Longhurst  
- The Architect’s PHPP Dashboard  
  Dylan Lamar & Skylar Swinford  
- Solving the Conflicts in ASHRAE + PHIUS Energy Modeling in Large/Commercial Passive Houses  
  Colin Schless  
- Passive House Architecture – Designing Toward the Future  
  Graham Irwin  
- Passive House – Great Idea! How Do I Sell It?  
  Tessa Smith, Zachary Serrke & Jonathan Bean  
  Mark Lyes & Lisa Westerhoff  
- Central Heat Pump Water Heating for Passive Houses  
  Shawn Gram & Colin Grist  
- Development and implementation of the Sanden CO2 Heat Pump Water Heater as a Combi for Passive House Buildings  
  Albert Rocks

## LUNCH

**SESSION 3**  
9:00-9:15  

**SESSION 4**  
10:00-10:15

**SESSION 5**  
12:00-1:15

**SESSION 6**  
3:00-4:00

## SESSION 3  
9:00-9:15

  Maren Longhurst  
- Solving the Conflicts in ASHRAE + PHIUS Energy Modeling in Large/Commercial Passive Houses  
  Colin Schless  
- The Architect’s PHPP Dashboard  
  Dylan Lamar & Skylar Swinford

## SESSION 4  
10:00-10:15

- Passive House Architecture – Designing Toward the Future  
  Graham Irwin  
- Passive House – Great Idea! How Do I Sell It?  
  Tessa Smith, Zachary Serrke & Jonathan Bean  
  Mark Lyes & Lisa Westerhoff  
- Central Heat Pump Water Heating for Passive Houses  
  Shawn Gram & Colin Grist  
- Development and implementation of the Sanden CO2 Heat Pump Water Heater as a Combi for Passive House Buildings  
  Albert Rocks

## SESSION 5  
12:00-1:15

- Wood Innovation Research Lab  
  Dr. Guido Wimmers  
- Rowing Together: Creating Highly Effective Teams to Achieve a Regenerative Future  
  Alex Boetzel & Erica Dunn  
- Decarbonization: A Way Forward, Hosted by New Buildings Institute  
  Ralph DiNola, Moderator  
  Lisa Westerhoff, Bronwyn Barry, & Jeff Frost  
- Comfort and Wellness in High Performance Buildings  
  Dan Luddy  
- Madison House - A Case Study  
  Tessa Smith

## SESSION 6  
3:00-4:00

- Weaving Large-Scale PH Envelope Design, Detailing and BEC into a Cohesive Approach  
  John Duncan, Janine McKay & Prudence Ferrera  
- Purifying the Murky Waters of Modeling Household Appliances in PHPP  
  Andrew Peel  
  Mike Steffen  
- Building Practices in the Northwest: What Does the Data Say?  
  Mehla Abraham & Dan Wildenhaus  
- Pax Futura - Washington's First Passive House Apartment Building  
  James Ortega & Sloan Ritchie

## CLOSING REMARKS & KEYNOTE: THE PATH TO PLACE, UW STUDENTS MID2MOD CLASS

- University of Washington graduate studio team will share their exciting vision for how a single family neighborhood designed in the 1950s can be transformed into a more sustainable and equitable neighborhood by 2050, creating an Eco District community that integrates historic preservation, urban planning, social capital, embodied carbon, energy benchmarking, and Passive House performance.
Quantifying the Carbon Footprint of Every Project
Stacy H. Smedley, Director of Sustainability at Skanska USA

Refreshing Refrigerants
Allan Montpellier, PAE; David Mead, PAE; & Thomas Schaar, SHED - What are refrigerants’ true carbon impact on the natural environment? A central component in current HVAC system design, refrigerants can be used as energy-saving tools. However, if released into the environment, many refrigerants have thousands of times the impact as CO2 and contribute directly to global warming. The presentation will draw from research done with Paul Hawkins’ Project Drawdown on the top solutions to reduce greenhouse gas emissions where refrigerant management came in as the number one solution.

Passive House in a Changing Climate
Eric Catania, RDH Building Science - Passive House buildings are finely tuned for the climate zone in which they are constructed. But how will these buildings perform when the climate changes? This presentation will introduce the study of future climate scenarios, will introduce sources of data for predictive future climate files, will review a procedure for creating predictive PHPP climate files, and will present an example of how the performance of a specific Passive House project may vary according to future climate scenarios.

Lucas Johnson, 475 High Performance Building Supply - With Passive House we have a proven approach to minimize operational carbon; however, embodied carbon is not a required consideration. Learn why this should not be overlooked to mitigate the climate crisis.

Envelope Workshop
Scott Kosmicki of Hinge Build Group & Josh Salinger of Birdsmouth will moderate this workshop style discussion of Passive House experts in our region to qualify the best assemblies in use for our climate zone that reach Passive House standards. The criteria will be based on Price, Trade Buildability and Risk Reduction. At the end of this workshop we should have a set of example assemblies to share with the Passive House community.

What to do with All Those Crappy Old Buildings?
Learnings from a NEEA Pilot on Small Commercial Buildings in the Pacific Northwest - Christy Love, RDH Building Science - Investigating a multi-year pilot study sponsored by the Northwest Energy Efficiency Alliance (NEEA) that was undertaken to predict and measure the energy savings and air quality impacts from this conversion method in (8) small commercial buildings throughout the Pacific Northwest.

Passive House design strategies, energy modeling
Corey Freed, Morrison Hershfield - Journey through an inspirational look at the global crises facing the world and a variety of ways to transform your business to adapt to a warmer, wetter world. Learn from our work with hundreds of municipalities, agencies, and companies to reduce their carbon, boost their performance, slash their operational expenses, and provide healthy spaces for everyone. Learn how to link design to outcome and uncover new ways to expand your business.

Building as a Conscious Act: Finding Opportunity in Health, Resiliency and Community
Eric Corey Freed, Morrison Hershfield - Opportunity at the global crises facing the world and a variety of ways to transform your business to adapt to a warmer, wetter world. Learn from our work with hundreds of municipalities, agencies, and companies to reduce their carbon, boost their performance, slash their operational expenses, and provide healthy spaces for everyone. Learn how to link design to outcome and uncover new ways to expand your business.

Accelerating Energy Efficiency in Oregon’s Built Environment
The Oregon Department of Energy (DOEE) will provide an overview and update on the implementation of Governor Kate Brown’s Executive Order (EO) 17-20, “Accelerate Efficiency in Oregon’s Built Environment”. The presentation will share progress to date on implementing the EO as well as how interested stakeholders can get involved.

Collective Impact: Pushing Policy to Reach Zero Energy & Zero Carbon Goals in the Northwest
Hosted by Earth Advantage. Panel: Amy Cortese, New Buildings Institute; Vihn Mason, City of Portland; Amy Wheless, NW Energy Coalition; Anthony Roy, Earth Advantage (moderator). - In both Oregon and Washington, change makers have formed coalitions to accelerate meeting ambitious carbon goals. What are the policies needed in the next five-to-ten years to ensure that all new buildings will be zero energy or zero energy ready and how are we going to get there? Washington’s Shift Zero and Zero Energy Ready Oregon (ZERO) will share their work and the developing tools to make getting to zero energy easier to understand and implement.

Advancing the Use of Non-Residential Passive Houses in Very Cold Climates
Andrea Frisque, Jeanie Chan & Sergio Sadaba of Stantec - In this presentation we will present a completed, certified non-residential Passive House, demonstrating it is possible to achieve certification in very cold climate Northern British Columbia.

Soils: A Case Study for Multifamily Passive House Condominiums
Emily Doe, Webber Thompson and Brian Heath, CEO of Solterra - The architect will provide a project overview; Passive House design strategies, energy modeling approach, constructibility considerations, and review key differences between single family and multifamily passive construction. An owner Q&A will discuss financing, market strategy, condo-ization, construction costs and public art.

HVAC Case Study: The Pax Futura Project
A 35 unit Passive House - Aaron Barnett, Cascade Built - Offering insights on permitting such an advanced design with the City of Seattle, making adequate provision for the space requirements of such systems, and approaches to managing the variety of usage patterns inherent to a multi-family project.
Introducing the new PHPP Expert Seal
Andrew Peel, Passive House Consulting - Exploring the new PHPP Expert seal, the first of several new seals being introduced by the International Passive House Institute. Get a detailed overview of the process, learning objectives, and requirements.

The Architect's PHPP Dashboard
Dylan Telford and Kyle Swiford of ESSC - The Architect's PHPP Dashboard enables architects and designers to run schematic-level energy analyses with the PHPP in a matter of 15 minutes in order to assess Passive House compliance. The Dashboard will be freely distributed to attendees with a licensed PHPP.

Maren Longhurst, Sam Rodell | Architects - Learn why Manual J,S,T,D (and N) calculations are so important, where manufacturers and how to speak the dialects of HVAC consultants and manufacturers.

Solving the Conflicts in ASHRAE + PHIUS Energy Modeling in Large/Commercial Passive Houses
Colin Schiess, Thornton Tomasetti - Investigate the differences and obstacles of each standard along with solutions for both in commercial building energy modeling applications.

Wood Innovation Research Lab
Dr. Guido Wimmers, University of Northern British Columbia - The WIRL is a small university-certified (Spring 2018) Passive House retro-fit lab with a large equipment industrial workshop for developing innovative structures using engineered wood products. Learn about the challenges involved in preparing meeting primary energy and for the dust extraction on ventilation and wall perforations.

Weaving Large-Scale PH Envelope Design, Detailing and BECx into a Cohesive Approach
John Duncan, Jamie McKay, and Prudence Ferreira from Morrison Hershfield - The panel will review intersection and how to create plans and sections that illustrate best practices for ducted mini splits, transfer fans, and HRVs in high performance homes.

Oregon Global Warming Commission Report & Clean Energy Jobs Bill
Lesley Wetaraszek, Senior Climate Analyst at the Oregon Department of Energy to the Oregon and Sam Purdie, commission member Oregon Global Warming Commission and CEO of Indow Windows, will present key conclusions from their latest report to the Oregon Legislature, discuss Oregon climate policies, and identify key roles for residential and commercial buildings. Joining Sam will be Renew Oregon to talk about the Clean Energy Jobs Bill working its way through the Oregon legislature.

Passive House Inspired Codes and Policies: How Leading Jurisdictions are Shifting Their Approach in order to Meet Ambitious Energy and Carbon Reduction Goals
Mark Lyles - New Buildings Institute, Lisa Westerhoff - Integral Group (Vancouver) - Advanced energy codes and policies are one of the biggest opportunities for cities and states to reduce energy consumption and carbon emissions. Jurisdictions including Massachusetts, New York and British Columbia have incorporated passive house principles into their Stretch or Step codes as an alternative code pathway to dramatically improve building performance and meet energy and carbon reduction goals.

Mike Steffen, Walsh Construction - A brief synopsis of our approach for developing a range of potential clients. Get the design process from the point of view of the developer/builder (Cascadia Built) and the passive building certification body (PHIUS).
Venue Map

SECOND FLOOR

TRADESHOW

A GRAND BALLROOM

D LIBRARY

C CARD ROOM

B BILLIARD ROOM

THIRD FLOOR

INFO DESK & CHECK-IN

SAVE ENERGY, TAKE THE STAIRS

KEY

1 FENSTUR WINDOWS
2 NW PARTNER’S
3 ZOLA WINDOWS
4 HENRY
5 SMALL PLANET SUPPLY
6 INNOTECH
7 AERO BARRIER
8 CASCADIA WINDOWS
9 SIGA
10 MITSUBISHI
11 GLO WINDOWS
12 ALPEN
13 475 HIGH PERFORMANCE BUILDING SUPPLY
14 PROSOCO

SAVE ENERGY, TAKE THE STAIRS

REFRESHMENTS SERVED DAILY AT 3:00