

PANEL 1 SESSION SCHEDULE

Monday, August 18

8:30 am - 10:00 am SESSION 1

New Trends in Heat Pump Water Heaters (Roderick Jackson)

Title: Model Predictive Control of Heat Pump Water Heaters for Energy Efficiency

Lead Author: Xin Jin, AO Smith

Title: To Duct or Not to Duct: Evaluating the Space Conditioning Impacts of Heat Pump Water Heaters in the PNNL Lab Homes

Lead Author: Sarah Widder, Pacific Northwest National Laboratory

Title: Effect of Setup Thermostat Schedule on Heat Pump Water Heater Energy Consumption, Coefficient of Performance and Peak Load

Lead Author: Philip Boudreaux, Oak Ridge National Laboratory

10:30 am - 12:00 pm SESSION 2

HVAC Control & Performance (David Roberts)

Title: Laboratory Measurements and Diagnostics of Residential HVAC Installation and Maintenance Faults

Lead Author: Robert Mowris, Robert Mowris & Associates, Inc.

Title: Is This My Fault? A Laboratory Investigation of FDD on a Residential HVAC Split System

Lead Author: Sean Gouw, Southern California Edison

Title: Maximizing the Benefits of Residential Pre-Cooling

Lead Author: Alea German, Davis Energy Group

Tuesday, August 19

8:30 am - 10:00 am SESSION 1

Ventilation Effectiveness (David Roberts)

Title: Houses are Dumb without Smart Ventilation

Lead Author: Iain Walker, Lawrence Berkeley National Laboratory (Max Sherman presenting)

Title: Measured Cooling Season Results Relating the Impact of Mechanical Ventilation on Energy, Comfort, and Indoor Air Quality in Humid Climates

Lead Author: Eric Martin, Florida Solar Energy Center (Dave Chasar presenting)

Title: Vent Right and Then? Mechanical Ventilation, Dehumidification and Energy Use in Humid Climates

Lead Author: Philip Fairey, Florida Solar Energy Center (Danny Parker presenting)

10:30 am - 12:00 pm SESSION 2

Addressing Challenges with Multifamily Buildings (Roderick Jackson)

Title: Modeling Ventilation in Multifamily Buildings

Lead Author: John Markley, UC Davis (Jonathan Woolley, presenting)

Title: Need for Systematic Retrofit Analysis in Multifamily Buildings

Lead Author: Mini Malhotra, Oak Ridge National Laboratory

Title: Lessons Learned: Performing QC on Energy Models

Lead Author: Kara Vega, TRC Energy Services

PANEL 1 SESSION SCHEDULE

Wednesday, August 20

8:30 am - 10:00 am SESSION 1

Residential HVAC System Selection and Design (David Roberts)

Title: *Making the Case for Oversizing Variable-Capacity Heat Pumps*

Lead Author: *James Cummings, Florida Solar Energy Center (Chuck Withers presenting)*

Title: *One Machine for Heating, Cooling, and Domestic Hot Water: Multi-Function Heat Pumps to Enable Zero Net Energy Homes*

Lead Author: *Mark Modera, Western Cooling Efficiency Center, UC Davis (Michael Koenig presenting)*

Title: *Why Pay for Two Condensing Systems When One Will Do?*

Lead Author: *Ben Schoenbauer, Center for Energy and Environment (Dave Bohac presenting)*

10:30 am - 12:00 pm SESSION 2

Ventilation Effectiveness: Part Deux (Roderick Jackson)

Title: *A Field Study of Ventilation System Effectiveness in Low Air Leakage Residences*

Lead Author: *David Hales, Washington State University Energy Program*

Title: *Addressing Kitchen Contaminants for Healthy Low-Energy Homes*

Lead Author: *Brett Singer, Lawrence Berkeley National Laboratory*

Title: *Optimization of Ventilation Energy Demands and Indoor Air Quality in High-Performance Homes*

Lead Author: *Diana Hun, Oak Ridge National Laboratory*

Thursday, August 21

8:30 am - 10:00 am SESSION 1

Easy to Overlook - Incremental Changes With Long-Term Impact (David Roberts)

Title: *Performance Monitoring of Residential Hot Water Distribution Systems*

Lead Author: *Anna Liao, Lawrence Berkeley National Laboratory*

Title: *Air Sealing Opportunities in New Construction*

Lead Author: *Matt Braman, Energy Trust of Oregon (Bruce Manclark presenting)*

Title: *Leaks and Lives: How Better Building Envelopes Make Blackouts Less Dangerous*

Lead Author: *Richard Leigh, U.S. Green Building Council*

10:30 am - 12:00 pm SESSION 2

Industry Trends in Residential Energy Performance (David Roberts)

Title: *From Energy Audits to Home Performance: 30 Years of Articles in Home Energy Magazine*

Lead Author: *Alan Meier, Lawrence Berkeley National Laboratory*

Title: *The Marriage of Residential Energy Codes and Rating Systems: Conflict Resolution or Just Conflict?*

Lead Author: *Z. Todd Taylor, Pacific Northwest National Laboratory*

Title: *Setting the Pace for the Race to Zero Energy Ready Homes*

Lead Author: *Sam Rashkin, U.S. Department of Energy*

PANEL 1 SESSION SCHEDULE

Friday, August 22

8:30 am - 10:00 am SESSION 1

Retrofit: Whole-Hog or Bit-by-Bit? (Roderick Jackson)

Title: *Lessons from the Field for Scaling Up Deep Energy Retrofits*

Lead Author: *Rachel Cluett, ACEEE*

Title: *Measured Results of Phased Shallow and Deep Retrofits in Existing Homes*

Lead Author: *Danny Parker, Florida Solar Energy Center*

Title: *Deep Energy Retrofits of High-Rise Multi-Unit Residential Buildings*

Lead Author: *Brittany Hanam, RDH Building Engineering*

10:30 am - 12:00 pm SESSION 2

Show Me the Data (Roderick Jackson)

Title: *Electricity Submetering on the Cheap: Stick-On Electricity Meters*

Lead Author: *Steven Lanzisera, Lawrence Berkeley National Laboratory*

Title: *Where Did It Go? Lost Savings Found in Real-World Data*

Lead Author: *Josh Rushton, NWPCC Regional Technical Forum*

OPEN SLOT