

Panel 3: Commercial Buildings: Technologies, Design, Operations, and Industry Trends

Panel Leaders: Alexi Miller, New Buildings Institute and Helia Zandi, Oak Ridge National Laboratory

| DATE | SESSION | TITLE | LEAD AUTHOR, ORGANIZATION |
|----------|---|--|--|
| Mon 8/3 | Session 1 8:30 am - 10:00 am Diving Deep into Data: Advances in Resources, Visualization, and Prototypes | <i>Machine Learning for Army Meter Data Analysis</i> | Richard McClure, U.S. Army Corps of Engineers |
| | | <i>Bill of Material Characterization for DOE Commercial Building Prototypes</i> | Michael Tillou, Pacific Northwest National Laboratory |
| | | <i>Reshape the PNW. New load shapes incoming for commercial HVAC</i> | Christopher Williams, DNV |
| | Session 2 10:30 am - 12:00 pm Prototyping the Future: Model and Software Innovations for Commercial Buildings | <i>Digitizing Today's Buildings in the Real World: Lessons from Field Demonstrations</i> | Anand Krishnan Prakash, Lawrence Berkeley National Laboratory |
| | | <i>Toward a Unified California Commercial Modeling Platform: Prototypes and an Engine-Agnostic Scorecard</i> | Mohammad Dabbagh, Noresco |
| | | <i>Don't Judge an RTU by Its Cooling Label</i> | Chris Wolgamott, NEEA |
| Tues 8/4 | Session 1 8:30 am - 10:00 am Fiddling with the Roof(top Unit): Advancing RTU Performance | <i>Pump it Up!: Accelerating Efficient RTU Adoption in Commercial Buildings</i> | Christopher Sullivan-Trainor, Guidehouse |
| | | <i>Field Validation of Next-Generation Rooftop Units: Balancing Affordability, Reliability, and Energy Performance in Commercial Buildings</i> | Parveen Dhillon, National Renewable Energy Laboratory |
| | | <i>Quantifying HVAC: Solutions for Smarter Materials, Energy Use, and Design</i> | Scott Unger, Pacific Northwest National Laboratory |
| | Session 2 10:30 am - 12:00 pm Next Gen Commercial Water Heaters | <i>Evaluation of 120V heat pump water heaters in light commercial environments</i> | Aaron Tam, EPRI |
| | | <i>Commercial HPWH with Natural Gas Backup</i> | Joseph Rendall, Oak Ridge National Laboratory |
| | | <i>Design Innovation to Advance the Commercial HPWH market</i> | Evan Green, Ecotope |
| Wed 8/5 | Session 1 8:30 am - 10:00 am Control Freaks: Advances in Commercial Building Controls and Diagnostics | <i>Developing Actionable Operational Insights for Centralized Heat Pump Water Heating in Multifamily Affordable Housing</i> | Yiyang Dong, EPRI |
| | | <i>Cultivating the Next Generation of Analytics Software: Field Results and Commercialization Successes</i> | Jessica Granderson, Lawrence Berkeley National Laboratory |
| | | <i>Enter The AHU (36th Chamber of ASHRAE): The First Ever Large-Scale Field Study of ASHRAE G36</i> | Revati Deshpande, Lawrence Berkeley National Laboratory |

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| Wed 8/5 | Session 2 10:30 am - 12:00 pm | <i>Smarter Buildings, Smarter Savings: Harnessing AI for Building Management and Commissioning</i> | Andrew Volent, Guidehouse |
| | Buildings with Brains: AI for Commercial Buildings | <i>Scalable framework for delivering demand flexibility from buildings using machine learning</i> | Matthew Brugman, EDO Energy |
| | | <i>Leveraging Machine Learning for Data-Driven Decision Making in Building Portfolios</i> | Paul Torcellini, National Renewable Energy Laboratory |
| Thurs 8/6 | Session 1 8:30 am - 10:00 am | <i>Transforming Markets for Commercial Building Facades</i> | Helen Sanders, Technoform North America |
| | Efficiency is Skin-Deep: Face-Lifts for Commercial Building Envelopes | <i>Modular Electrification Pathways for Multifamily Buildings: Field Insights and Utility Program Opportunities Using Window Heat Pumps</i> | Samantha Lamos, Gradient Comfort |
| | | <i>Quantifying Retrofit Value: Energy Modeling and Field Validation of Commercial Secondary Windows in Schools</i> | Maggie Sheng, EPRI |
| | Session 2 10:30 am - 12:00 pm | <i>Audit Template: A Modular, Interoperable Web-Based Platform for Building Energy Audits and Retrofit Planning</i> | Supriya Goel, Pacific Northwest National Laboratory |
| | Ramping Up Retrofits: From Audits to Outcomes | <i>"Every Retrofit is a Snowflake" - Novel Approaches to Collecting and Modeling Retrofit Cost Data Collection Across Heterogeneous Commercial Building Stocks</i> | Han Li, Lawrence Berkeley National Laboratory |
| | | <i>If You Can't Stand the Heat, Get into the Kitchen: The Case (Study) for DOAS in Commercial Kitchen</i> | Ralph DiNola, Building Insights Group |
| Fri 8/7 | Session 1 8:30 am - 10:00 am | <i>Beyond the Burner: Scaling Hidden Efficiency Opportunities in Rooftop Units</i> | Rebecca Hovey, Energy350 |
| | Hybrid HVAC: Emerging Thermal Energy Storage and Dual Fuel Technologies | <i>Challenges and Opportunities for HVAC + Phase Change Material Thermal Energy Storage in Buildings</i> | Spencer Dutton, Lawrence Berkeley National Laboratory |
| | | <i>Store It While It's Hot: Thermal Energy in Commercial Buildings</i> | Edie Taylor, 2050 Partners |
| | | Session 2 10:30 am - 12:00 pm | <i>Variable Refrigerant Flow in the Field: The Good, the Bad & the Leaky</i> |
| | Refrigerants in Commercial Buildings: Current Trends and Best Practices | <i>The Hidden E-Strategy: Managing Refrigerants for Efficiency and the Economy</i> | Heather Goetsch, National Renewable Energy Laboratory |
| | | <i>Stopping Leaks, Keeping it Cool – Findings to help small and independent grocery stores maintain efficiency and reduce costs through refrigerant management.</i> | Brad Hoover, DNV |