

**DRAFT - schedule changes weekly**

**PANEL: 3 - Commercial Buildings: Technologies, Design, Performance Analysis, Construction, and Building Industry Trends (Scripps)**

Day	SESSION	LEAD AUTHOR/ORGANIZATION	TITLE
Mon 8/22	Session 1 8:30 am - 10:00 am Commercial Building Benchmarking & Rating	Supriya Goel, Pacific Northwest National Laboratory	Streamlining Building Efficiency Evaluation with DOE's Asset Score Preview
		Richard Leigh, Pratt Institute	Benchmarking and Audit Data Inform Building Science
		Ryan Colker, National Institute of Building Science	Advancing Achievement of Outcomes through Certified Prescriptive Packages
	Session 2 10:30 am - 12:00 pm Beyond Demand Response: Internet-of-Things and Transaction-Based Controls	George Hernandez, Pacific Northwest National Laboratory	Supporting a Thriving Transaction Based Controls Ecosystem
		Michael Deru, National Renewable Energy Laboratory	Field Testing and Modeling of Supermarket Refrigeration Systems as a Demand Response Resource
		Penn Zhao, EPRI	Getting into the Zone: How the Internet of Things can Improve Energy Efficiency and Demand Response in a Commercial Building
Tues 8/23	Session 1 8:30 am - 10:00 am Solutions for Widespread Integration of Distributed Renewable Energy	Yashen Lin, University of Michigan	Explaining Inefficiencies in Buildings Providing Ancillary Services
		Anthony Duer, Applied Energy Group	Battery Storage Optimization and Deployment: A Primer
		Jonathan Hart, Center for Sustainable Energy	Small Thermal Energy Storage and Its Role in Our Clean Energy Future
	Session 2 10:30 am - 12:00 pm Emerging Technologies for Commercial Buildings	Micah Sweeney, Electric Power Research Institute	Server Demand Response via Automated Hardware Management
		Jonathan Woolley, University of California, Davis	Outside the Box: Climate Appropriate Hybrid Air Conditioning as a Paradigm Shift for Commercial Rooftop Packaged Units
		David Gilliland, kW Engineering	Cloud-Based Energy Management Software: The Next Step in Energy Efficiency or Marketing Mumbo Jumbo?

Day	SESSION	LEAD AUTHOR/ORGANIZATION	TITLE
Wed 8/24	Session 1 8:30 am - 10:00 am Advancing Net-Zero Energy Commercial Buildings	Gwelen Paliaga, TRC Energy Services	Using Integrated Packages to Advance Buildings towards ZNE
		Christopher Meek, University of Washington	Metered Energy Efficiency Transaction Structure in Ultra-Efficient New Construction: Pay-for-Performance at the Bullitt Center in Seattle, WA
		Alex Herceg, Lux Research Inc.	Identifying Disruption in Advanced HVAC Technologies for Commercial Buildings
	Session 2 10:30 am - 12:00 pm Advances in Commercial Building Codes and Standards	Adam McMillen, Seventhwave	Codes Don't Always Get Enforced, but Contracts Do: Changing the Procurement Paradigm to Drive Building Energy Performance
		Cindy Strecker, CLEAResult	Utility Program Cost Effectiveness of Variable Refrigerant Flow Systems
		Kurt Herzog, Acutherm, LLC	Achieving High Satisfaction in High Performance Buildings
Thurs 8/25	Session 1 8:30 am - 10:00 am Systems Innovations for Commercial Buildings	Laura Van Wie McGrory, Alliance to Save Energy	Systems Efficiency Initiative: A Systems Approach to Commercial Building Energy Efficiency
		Frank Sharp, Electric Power Research Institute	Robotic Evaluation of Commercial Space Performance
		Duane Jonlin, City of Seattle	Can High-Performance Equipment Lead to a Low-Performance Building?
	Session 2 10:30 am - 12:00 pm Advancing Control Strategies for Commercial Buildings	Ahmed Tukur, University of Dayton	Energy Savings from Robust Control of Static Pressure Based upon Zonal Occupancy for Multiple-Zone VAV Systems
		Mary Ann Piette, Lawrence Berkeley National Laboratory	Comparison of Actual Costs to Integrate Commercial Buildings with the Grid Flexibility Programs
		Eva Urbatsch, Aerotek for Bonneville Power Administration	Dude, Where's My Savings: An Investigation of Project Performance
Fri 8/26	Session 1 8:30 am - 10:00 am High Performance Commercial Buildings	Heather Dillon, University of Portland	Commercial Building Partnerships: Intervening Globally to Save Energy Locally
		Scott Hackel, Seventhwave	Advancing the Last Frontier: Reduction of Commercial Plug Loads
		Joelle Michaels, U.S. Energy Information Administration	Green Building Certification and the Commercial Building Energy Consumption Survey (CBECS)
	Session 2 10:30 am - 12:00 pm Climate Change & Energy Efficiency	Mike Thompson, Ingersoll Rand	Merging the Transition to Next Generation HVAC Refrigerant Technology with Effective Climate Policy
		Scott Schuetter, Seventhwave	Is it Getting Hot in Here? How Climate Change will Impact Energy Efficiency Choices
		Sanyogita Manu, Centre for Advance Research in Building Science & Energy	Opportunities and Challenges in Monitoring the Thermal Performance of Passive Buildings in India

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	Alternate	John Martin, International Association of Lighting Designers	A Radical Proposal: Simplify Codes by Relying on Professional Competence and Outcomes!
VISUALS		Damon Woods, University of Idaho Integrated Design Lab	Simulation on Demand for Deep Energy Retrofits
		Rathish Arumugam, Saint Gobain Research India	Office-like Test Chambers to Measure Cool Roof Energy Savings in Four Indian Climates