

## PANEL 12 SESSION SCHEDULE

**(DRAFT: Subject to change)**

PANEL 12 - Smart Buildings, Smart Grid, and the Internet of Things			
		LEAD AUTHOR/ORGANIZATION	TITLE
<b>Mon 8/13</b>	Session 1 8:30 am - 10:00 am <b>The Internet of Things</b>	Wesley Whited, DNV GL	IoT for Everyone!
		Tom Fisher, Vermont Energy Investment Corporation	Sub-metering IoT: The Future Was Yesterday
		Barry Coflan, Schneider Electric	The wonders of AI: Even in your HVAC!
	Session 2 10:30 pm - 12:00 pm <b>HEM(ming) (Not Hawing) - Smart Home Controls</b>	Bethany Sparn, National Renewable Energy Laboratory	Laboratory Resources and Techniques to Evaluate Smart Home Technology
		Katherine Cort, Pacific Northwest National Laboratory	Completing the Connected Home with Smart Window Shades
		Eric Martin, Florida Solar Energy Center	Energy Savings and Comfort Enhancement Potential of Smart Ventilation Control
<b>Tues 8/14</b>	Session 1 8:30 am - 10:00 am <b>Failure is <del>Not</del> Always an Option - FDD and Optimization</b>	Cameron Roach, Buildings Alive, Ltd.	Unsupervised fault detection and diagnostics: detecting unusual behaviour in buildings using BMS data
		Siliang Lu, Carnegie Mellon University	Simulations of dynamic ventilation operations with real-time occupancy estimation
		Abinesh Selvacanabady, Pacific Northwest Natoinal	Advanced Data Analytics and Control of Building Energy Systems
	Session 2 10:30 pm - 12:00 pm <b>Trustworthy Transactions - Data Security and Verification</b>	Rois Langer, National Renewable Energy Laboratory	Navigating Communication Protocols and Cyber Security Implications of Wireless Meter and Control Technologies for Plug Loads
		Leopoldo Molina, CENDES	Blockchain for climate change mitigation through effective and distributed energy efficiency actions
		Dylan Cutler, National Renewable Energy Laboratory	A Demonstration of Blockchain-based Energy Transactions between Laboratory Test Homes

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Wed 8/15	Session 1 8:30 am - 10:00 am <b>Go Big or Go Home - Large Scale Modeling</b>	David Pudleiner, ICF International	A Customizable Framework for Large Scale Portfolio Analysis through Cloud-based Building Energy Modeling
		Peter Alstone, Humboldt State University	Integrated analysis of Demand Response, Energy Efficiency, and Energy Storage Potential for Large-scale Renewable Energy Integration
		Hao Huang, Buildings Alive, Ltd.	Predicting energy demand in commercial buildings under extreme conditions: how much accuracy improvement can we make?
	Session 2 10:30 pm - 12:00 pm <b>Data to Deeds - Operationalizing Analytics</b>	Hannah Kramer, Lawrence Berkeley National Laboratory	Moving Beyond Data Paralysis to Effective Use of Analytics and Diagnostics
		Jim Kelsey, kW Engineering	Bringing Big Data Analytics to Retro-commission the Corner Grocery Store
		Oliver Davis, Simuwatt	Converting Raw Data to Analytics to Action for Commercial Buildings
Thurs 8/16	Session 1 8:30 am - 10:00 am <b>Adding Value with Controls</b>	Ethan Goldman, Vermont Energy Investment Corporation	Free X-Ray Specs—Just Send in Your Smart Thermostat Data for an Automated Peek inside Your Home’s Walls!
		Michael Zeifman, Fraunhofer Center for Sustainable	Residential retrofits at scale: opportunity identification, saving estimation and personalized messaging based on communicating thermostat data
		Brian Gerke, Lawrence Berkeley National Laboratory	The value proposition for demand-responsive commercial lighting: I. Site level energy savings and cost-benefit analysis.
	Session 2 10:30 pm - 12:00 pm <b>Efficiency Efficiently</b>	Chris Perry, ACEEE	Leveraging Data to Overcome Smart Building Skepticism
		Marty Davey, New Ecology, Inc.	BEMS on a Budget: Energy savings with low-cost, cloud-based monitoring systems in affordable housing
		Kristin Field-Macumber, National Renewable Energy Lab.	BuildingSync in Action: Case Studies

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<b>Fri 8/17</b>	Session 1 8:30 am - 10:00 am <b>Using Data to Get from Here to There</b>	Marina Sofos, U.S. Department of Energy	An R&D Roadmap of Cyber-Physical Systems for Building Energy Management
		John Elliott, Lawrence Berkeley National Laboratory	Towards a scalable model for smart buildings
		David Blum, Lawrence Berkeley National Laboratory	When Data Analytics Meet Site Operation: Benefits and Challenges
	Session 2 10:30 pm - 12:00 pm <b>Controls Potpourri for 100, Alex</b>	Penn Zhao, Electric Power Research Insitute	Integrating Connected Loads to Provide Grid Balancing and Distribution Support
		Joshua Rasin, Sacramento Municipal Utility District	Demonstration of Electric Resistance Water Heater Controller to Support Flexible Demand Response

<b>See Panel 14 for schedule</b>	<b>POSTER</b>	<b>Poster with published paper in Panel 12</b>	
		Kelly Sanders, Energy Solutions	The value proposition for demand-responsive commercial lighting: II. Non-energy benefits