

3 Commercial Buildings: Technologies, Design, Performance Analysis, and Building Industry Trends

High Performance Relocatable Classrooms

Gregg Ander, Southern California Edison

R. Anthony Pierce, Southern California Edison

Christine Magar, Southern California Edison

Eric Jones, Southern California Edison

Designing Building Systems to Save Energy and Improve Indoor Environments: A Practical Demonstration

M.G. Apte, Lawrence Berkeley National Laboratory

W.J. Fisk, Lawrence Berkeley National Laboratory

A.T. Hodgson, Lawrence Berkeley National Laboratory

D.G. Shendell, Lawrence Berkeley National Laboratory

Leo Rainer, Davis Energy Group, Inc.

M. A. Hoeschele, Davis Energy Group, Inc.

Retrocommissioning Within the U.S. Green Building Council's LEED for Existing Buildings (LEED-EB) Certification System

Eric Baxter, Portland Energy Conservation, Inc.
Hannah Friedman, Portland Energy Conservation, Inc.
Larry Luskay, Portland Energy Conservation, Inc.
Tudi Haasl, Portland Energy Conservation, Inc.

Beyond Commissioning

Michael R. Brambley, Pacific Northwest National Laboratory
Srinivas Katipamula, Pacific Northwest National Laboratory

Performance Evaluation of Rooftop Air Conditioning Units At High Ambient Temperatures

Ramin Faramarzi, Southern California Edison
Bruce Coburn, Southern California Edison
Rafik Sarhadian, Southern California Edison
Scott Mitchell, Southern California Edison
R. Anthony Pierce, Southern California Edison

Creating California's Online Commissioning Case Study Database: Case Studies Go High Tech

Hannah Friedman, Portland Energy Conservation, Inc.
Tudi Haasl, Portland Energy Conservation, Inc.
Ken Gillespie, Pacific Gas & Electric Company

Strategies for Improving Persistence of Commissioning Benefits: Making Lasting Improvements in Building Operations

Tudi Haasl, Portland Energy Conservation, Inc.
Hannah Friedman, Portland Energy Conservation, Inc.
Amanda Potter, Portland Energy Conservation, Inc.

Commissioning of New Schools: A State Funded Study of the Costs and Benefits

Kristin Heinemeier, Brooks Energy and Sustainability Lab
Michael Martin, Brooks Energy and Sustainability Lab
Dean Schneider, Brooks Energy and Sustainability Lab
Balaji Santhanakrishnan, Johnson Controls, Inc.
Anita Ledbetter, Solar San Antonio
Jim Shoop, Testing Specialties, Inc.
Wes Harvey, Testing Specialties, Inc.
Joseph Martin, Northside Independent School District
Frank Thomas, Northside Independent School District

Emerging Lighting Technologies and Applications: Combining the New with the Tried and True

Karl Johnson, California Institute for Energy Efficiency
Donald Aumann, California Energy Commission
Judie Porter, Architectural Energy Corporation

Efficient Lighting Design and Office Worker Productivity

Carol Jones, Pacific Northwest National Laboratory
Kelly Gordon, Pacific Northwest National Laboratory

Wireless Condition Monitoring and Maintenance for Rooftop Packaged Heating, Ventilating and Air-Conditioning

Srinivas Katipamula, Pacific Northwest National Laboratory
Michael R. Brambley, Pacific Northwest National Laboratory

Opportunities of Wireless Sensors and Controls for Building Operation

Michael Kintner-Meyer, Pacific Northwest National Laboratory
Rob Conant, Dust Inc.

Notes from the Field: Identifying Demand-Response Measures Customers Will Actually Do

Julia K. Larkin, KEMA-Xenergy
Dan Thomas, KEMA-Xenergy
Ed Jerome, Nexant
Michael Rufo, Quantum Consulting, Inc.

Design and Optimization of a Displacement Ventilation System for a Large Retail Store

Isabelle Lavedrin, Arup
Peter Alspach, Arup
Alisdair McGregor, Arup
Sean Timmons, Arup

Market Transformation Opportunities for Emerging Dynamic Façade and Dimmable Lighting Control Systems

Eleanor S. Lee, Lawrence Berkeley National Laboratory
Stephen E. Selkowitz, Lawrence Berkeley National Laboratory
Glenn D. Hughes, The New York Times Company

Application of Automated Fault Detection and Diagnostics for Rooftop Air Conditioners in California

Haorong Li, Purdue University
James Braun, Purdue University

Thermal Displacement Ventilation (TDV) in Schools: Improving Indoor Air Quality and Saving Energy

Andrey Livchak, Halton Company
Charles Eley, Architectural Energy Corporation
Zeqiang Sun, Halton Company
John Arent, Architectural Energy Corporation
Vern Smith, Architectural Energy Corporation

Modular Skylight Systems: Best Practices for Designing Skylights with Suspended Ceilings

Puja Manglani, Heschong Mahone Group, Inc.
Jon McHugh, Heschong Mahone Group, Inc.
Lisa Heschong, Heschong Mahone Group, Inc.
Rocelyn Dee, Heschong Mahone Group, Inc.

Rating Energy Efficiency and Sustainability in Laboratories: Results and Lessons from the Labs21 Program

Paul Mathew, Lawrence Berkeley National Laboratory
Dale Sartor, Lawrence Berkeley National Laboratory
Otto Van Geet, National Renewable Energy Laboratory
Sue Reilly, Enermodal Engineering, Inc.

Measurement and Evaluation Techniques for Automated Demand Response Demonstration

Naoya Motegi, Lawrence Berkeley National Laboratory
Mary Ann Piette, Lawrence Berkeley National Laboratory
David S. Watson, Lawrence Berkeley National Laboratory
Osman Sezgen, Lawrence Berkeley National Laboratory

Performance Analysis of Hotel Lighting Control System

Erik Page, California Lighting Technology Center
Michael Siminovitch, California Lighting Technology Center

High Performance Schools: Affordable Green Design for K-12 Schools

Patricia Plympton, National Renewable Energy Laboratory
John Brown, National Renewable Energy Laboratory
Kara Stevens, National Renewable Energy Laboratory

Paving the Path for a New Generation of High-Efficiency Supermarket Refrigerated Display Cases

Rafik Sarhadian, Southern California Edison
Ramin Faramarzi, Southern California Edison
Bruce A. Coburn, Southern California Edison
John Lutton, Southern California Edison
Homayun Navaz, Kettering University
David Walker, Foster-Miller Inc.

Commissioning and Envelope Leakage: Using HVAC Operating Strategies to Meet Design and Construction Challenges

David Sellers, Portland Energy Conservation, Inc.
Hannah Friedman, Portland Energy Conservation, Inc.
Larry Luskay, Portland Energy Conservation, Inc.
Tudi Haasl, Portland Energy Conservation, Inc.

Demand Response Enabling Technologies and Case Studies from the NYSERDA Peak Load Reduction Program

Chris Smith, New York State Energy and Research Development Authority
Gary Epstein, Energy & Resource Solutions, Inc.
Mark D'Antonio, Energy & Resource Solutions, Inc.

Preliminary Evaluation of Performance Enhanced Relocatable Classrooms in Three Climates

Stephanie D. Thomas-Rees, Florida Solar Energy Center
Danny S. Parker, Florida Solar Energy Center
John R. Sherwin, Florida Solar Energy Center

Lessons Learned from Field Evaluation of Six High-Performance Buildings

Paul A. Torcellini, National Renewable Energy Laboratory

Michael Deru, National Renewable Energy Laboratory

Brent Griffith, National Renewable Energy Laboratory

Nicholas Long, National Renewable Energy Laboratory

Shanti Pless, National Renewable Energy Laboratory

Ron Judkoff, National Renewable Energy Laboratory

Drury B. Crawley, U.S. Department of Energy

The Costs and Benefits of Achieving Silver LEED For Two Seattle Municipal Buildings

Bing Tso, SBW Consulting, Inc.

Marc Schuldt, SBW Consulting, Inc.

Jun Quan, Seattle Fleets & Facilities Department

Machine to Machine (M2M) Technology in Demand Responsive Commercial Buildings

David S. Watson, Lawrence Berkeley National Laboratory

Mary Ann Piette, Lawrence Berkeley National Laboratory

Osman Sezgen, Lawrence Berkeley National Laboratory

Naoya Motegi, Lawrence Berkeley National Laboratory

Applying the Latest Technologies for Superior Lighting: New Applications of the Advanced Lighting Guidelines, 2003 Edition

David E. Weigand, New Buildings Institute, Inc.

James Benya, Benya Lighting Design

Peak Demand Reduction from Pre-Cooling with Zone Temperature Reset in an Office Building

Peng Xu, Lawrence Berkeley National Laboratory

Philip Haves, Lawrence Berkeley National Laboratory

Mary Ann Piette, Lawrence Berkeley National Laboratory

James Braun, Purdue University