

Table of Contents

1 – Residential Buildings: Technologies, Design, Performance Analysis, and Building Industry Trends

The Operation Result of the Demonstration of Energy Networks of Electricity, Heat, and Hydrogen at an Apartment Building in 2007

Hirohisa Aki, National Institute of Advanced Industrial Science and Technology (AIST)
Yukinobu Taniguchi, National Institute of Advanced Industrial Science and Technology (AIST)
Junji Kondoh, National Institute of Advanced Industrial Science and Technology (AIST)
Itaru Tamura, Osaka Gas Co., Ltd.
Akeshi Kegasa, Osaka Gas Co., Ltd.
Yoshiro Ishikawa, KRI Inc.
Shigeo Yamamoto, KRI Inc.
Ichiro Sugimoto, KRI Inc.

Modeling the Impacts of Performance Components in Super Energy Efficient House Designs in Different Climate Zones

John Broniek, IBACOS Inc.

Demand Response-Enabled Residential Thermostat Controls

Xue Chen, University of California, Berkeley
Jaehwi Jang, University of California, Berkeley
David M. Auslander, University of California, Berkeley
Therese Peffer, University of California, Berkeley
Edward Arens, University of California, Berkeley

Zero Energy Peak from Zero Energy Homes

Jeff Christian, Oak Ridge National Laboratory

Field Tests of Specially Selected Air Conditioners for Hot Dry Climates

Abram Conant, Proctor Engineering Group
John Proctor, Proctor Engineering Group
Lance Elberling, Pacific Gas & Electric Company

Field Monitoring of High Efficiency Residential Heat Pumps

Bob Davis, Ecotope, Inc.
David Robison, Stellar Processes

Least Cost Path to Achieving 50% Reduction in Residential Energy Use (in Heating Climates)

Jan Harris, X Prize Foundation
Michael Blasnik, Blasnik and Associates

Can Conventional Cooling Equipment Meet Dehumidification Needs for Houses in Humid Climates?

Hugh Henderson, CDH Energy Corp.
Don Shirey, Florida Solar Energy Center
C. Keith Rice, Oak Ridge National Laboratory

Integration of Energy Management, Electrical Submetering and Time Sensitive Pricing in a Large

Residential Community Utilizing Wireless Communications

Herbert Hirschfeld, Consultant

How Energy Efficient Are Modern Dishwashers?

David Hoak, Florida Solar Energy Center

Danny Parker, Florida Solar Energy Center

Andreas H. Hermelink, Florida Solar Energy Center

Development of an Integrated Residential Humid Climate HVAC System

Marc Hoeschele, Davis Energy Group, Inc.

David Springer, Davis Energy Group, Inc.

Measured Effect of Air Flow and Refrigerant Charge on a High-Performance Heat Pump

Erin Kruse, Ecotope, Inc.

Larry Palmiter, Ecotope, Inc.

Paul Francisco, Univeristy of Illinois

Moving Ducts Inside: Big Builders, Scientists Find Common Ground

Michael Lubliner, Washington State University

Ryan Kerr, Consol

Andrew Gordon, WSU Energy Program

Chuck Murray, Washington State Department of Trade and Economic Development

Manufactured Panelized Roof System for Residential Buildings

Susan Mantell, University of Minnesota

Jane Davidson, University of Minnesota

Gur Mittelman, University of Minnesota

Giovanni Di Muoio, University of Minnesota

Garrett Mosiman, University of Minnesota

John C. Carmody, University of Minnesota

Taichiro Okazaki, University of Minnesota

Carol K. Shield, University of Minnesota

B.J. Siljenberg, University of Minnesota

Dave MacDonald, Mattson MacDonald Young

Next Generation Roofs and Attics for Homes

William Miller, Oak Ridge National Laboratory

Jan Kośny, Oak Ridge National Laboratory

Peak Demand and Energy Savings from Properly Sized and Matched Air Conditioners

Robert Mowris, Verified, Inc.

Ean Jones, Verified, Inc.

NightCool: A Nocturnal Radiation Cooling Concept

Danny Parker, Florida Solar Energy Center

John R. Sherwin, Florida Solar Energy Center

Andreas H. Hermelink, Florida Solar Energy Center

The Challenge of Vapor-Diaphragm Thermostat Retrofits in Existing Multifamily Buildings

Jeffrey Romberger, SBW Consulting, Inc.

Debra Tachibana, Seattle City Light

Randall Birk, SBW Consulting, Inc.

Systems Research on Residential Ventilation

Armin Rudd, Building Science Corporation
Joseph Lstiburek, Building Science Corporation

Energy-Related Water Fixture Measurements: Securing the Baseline for Northwest Single Family Homes

Marc Schuldt, SBW Consulting, Inc.
Debra Tachibana, Seattle City Light

HWSIM: Development and Validation of a Residential Hot Water Distribution System Model

David Springer, Davis Energy Group, Inc.
Leo Rainer, Davis Energy Group, Inc.
Marc Hoeschele, Davis Energy Group, Inc.
Robert Scott, RASENT Solutions

Too Much Stick? Not Enough Carrot? Testing the Presumption of Non-Compliance

Eric Swan, RLW Analytics
Jarred Metoyer, RLW Analytics
Wim Bos, Sacramento Municipal Utility District

Effects of Air Conditioner Sizing on Energy Consumption and Peak Demand in a Hot-Dry Climate

Aaron Townsend, Building Science Corporation
Kohta Ueno, Building Science Corporation

Field Monitoring of Wall Vapor Control Strategies in the Pacific Northwest

Kohta Ueno, Building Science Corporation
Aaron Townsend, Building Science Corporation
Michael Lubliner, Washington State University

2 – Residential Buildings: Program Design, Implementation, and Evaluation

New Approaches to Residential Direct Load Control in California

Michael Alexander, Pacific Gas & Electric Company
Ken Agnew
Miriam Goldberg, KEMA, Inc.

Maine's Model CFL Recycling Program

Harley Barnes, Lockheed Martin
Richard Bacon, Efficiency Maine, Maine Public Utilities Commission

Home Performance with Energy Star: Utility Bill Analysis on Homes Participating in Austin Energy's Program

David Belzer, Pacific Northwest National Laboratory
Gail Mosey, National Renewable Energy Laboratory
Leila Dagher, National Renewable Energy Laboratory
Patricia Plympton, Navigant Consulting, Inc.

Energy Efficiency Mass Distribution Program Innovations

Jacqueline Berger, APPRISE
Jeff Ackermann, Colorado Public Utilities Commission
Michael Blasnik, Blasnik and Associates

Modelling the Relationship between Energy Efficiency Attributes and House Price: The Case of Detached Houses Sold in the Australian Capital Territory in 2005 and 2006

Stephen Berry, Department of the Environment, Water, Heritage and the Arts
Tony Marker, Department of the Environment, Water, Heritage and the Arts
Tom Chevalier, Department of the Environment, Water, Heritage and the Arts

High Performance Homes in the Southwest: Savings Potential, Cost Effectiveness and Policy Options

Stephen Dunn, Southwest Energy Efficiency Project
Will Geller, Southwest Energy Efficiency Project

Maine New Homes: How a Baseline Study Can Set You Straight

Richard Faesy, Vermont Energy Investment Corporation
Leslie Badger, Vermont Energy Investment Corporation
Paul Scheckel, Vermont Energy Investment Corporation
Dorothy Conant, Consultant

Refrigerator Early Retirement, Replacement and Recycling with Community Partners

Diane Ferington, Energy Trust of Oregon
Kate Scott, Energy Trust of Oregon

Furnace Blower Electricity: National and Regional Savings Potential

Victor Franco, Lawrence Berkeley National Laboratory
James Lutz, Lawrence Berkeley National Laboratory
Alex Lekov, Lawrence Berkeley National Laboratory
Lixing Gu, Florida Solar Energy Center

Promoting Combined Heat and Power (CHP) for Multifamily Properties

Robert Groberg, U.S. Department of Housing and Urban Development
J. Michael MacDonald, Oak Ridge National Laboratory
Patti Garland, Oak Ridge National Laboratory

On a Crash Course? How Two Programs Avoid a Market Collision and Work Together

Sue Hanson, Wisconsin Energy Conservation Corporation
Robin Pharo, Green Built Home

Lessons Learned in Selecting Impact Evaluation Methodologies: Metering, Modeling, or Billing Analysis?

Robert Kasman, Pacific Gas and Electric Company

Welcome to the Dark Side: The Effect of Switching on CFL Measure Life

Corina Jump, Itron, Inc.
James J. Hirsch, James J. Hirsch and Associates
Jane S. Peters, Research Into Action
Dulane Moran, Research Into Action

Behavior: The Final Frontier

Phillip Kelsven, Conservation Services Group

Targeting Energy Efficiency in Commercial Buildings Using Advanced Billing Analysis

Kelly Kissock, University of Dayton
Steve Mulqueen, University of Dayton

Home Performance with ENERGY STAR® in California: Moving Into the Spotlight

Robert Knight, Bevilacqua-Knight, Inc.
Fran Curl, Southern California Edison
Subid Wagley, Pacific Gas & Electric
Ganesh Venkat, Southern California Gas Company

NYSERDA's Multifamily Performance Program: Rounding the First Turn

Mark Lorentzen, TRC Energy Services
Tom Rooney, TRC Energy Services
Michael Colgrove, New York State Energy Research and Development Authority
Patrick Fitzgerald, New York State Energy Research and Development Authority

Cook County Energy Savers: How Energy Efficiency in Chicago's Multi-Family Buildings Has Evolved to Meet New Challenges from the 1980's to the Present Day

Peter Ludwig, Center for Neighborhood Technology
Anne Evens, Center for Neighborhood Technology
Larry Kotewa, Center for Neighborhood Technology

Solar Water Heating: Ready for Prime Time?

Andrew McAllister, California Center for Sustainable Energy
Annie Henderson, California Center for Sustainable Energy
Nicolas Chaset, California Public Utilities Commission

CFL Program Strategy Review: No Programmatic "Silver Bullet"

Dulane Moran, Research Into Action
Jane S. Peters, Research Into Action
Shahana Samiullah, Southern California Edison
Corina Jump, Itron, Inc.
James J. Hirsch, James J. Hirsch and Associates

Residential Baseload Energy Use: Concept and Potential for AMI Customers

Dennis Nelson, BC Hydro - Power Smart

Home Performance with ENERGY STAR: Accelerating Energy Efficiency Improvements in Existing Homes

Patricia Plympton, Navigant Consulting, Inc.
Sarah Boman, Navigant Consulting, Inc.
Terry Logee, U.S. Department of Energy
Lani MacRae, U.S. Department of Energy
Edward Pollock, U.S. Department of Energy
Paul Norton, National Renewable Energy Laboratory
Julie Hawkins, D&R International

Who's Buying CFLs? Who's Not Buying Them? Findings from a Large-Scale, Nationwide Survey

Michael Reid, E Source

Upstream with Residential HVAC Programming in the Northeast

Edward Schmidt, Northeast Energy Efficiency Partnerships
David Legg, National Grid
Scott Markwood, Honeywell Utility Solutions/NJ Clean Energy Program
Richard Moran, NSTAR Electric

Making Waves in the Heartland: How Illinois' Experience with Residential Real-Time Pricing Can Be a National Model

Anthony Star, CNT Energy

Anne Evens, Center for Neighborhood Technology

Marjorie Isaacson, CNT Energy

Larry Kotewa, Center for Neighborhood Technology

Experimental Evidence: A Residential Time of Use Pilot

Iris Sulyma, Power Smart, BC Hydro

Ken Tiedemann, BC Hydro

Marc Pedersen, BC Hydro

Mark Rebman, BC Hydro

Min Yu, BC Hydro

An Integrated Whole Building Diagnostic Approach to Improving California's Existing Multifamily Buildings

Julieann Summerford, Heschong Mahone Group, Inc.

Elizabeth McCollum, Heschong Mahone Group, Inc.

Multifamily New Construction: Utility Program Leads the Way Toward Changing Building Practice and Energy Codes

Debra Tachibana, Seattle City Light

Bing Tso, SBW Consulting, Inc.

Jeffrey Romberger, SBW Consulting, Inc.

Measuring CFL Markets: A Collaborative Regional Study on the Northwest's Largest Efficiency Resource

Chris Thompson, Energy Market Innovations, Inc.

Dune Ives, Energy Market Innovations, Inc.

Doris Abravanel, Snohomish County PUD

Eric Brateng, Puget Sound Energy

Debra Tachibana, Seattle City Light

How Much More Does It Cost to Build an ENERGY STAR[®] Home? Incremental Cost Estimation Process

Betty Tolkin, Nexus Market Research

William Blake, National Grid

Steve Bonanno, NSTAR Electric & Gas

Dorothy Conant, Consultant

Thomas Mauldin, Nexus Market Research

Lynn Hoefgen, Nexus Market Research

Smart Metering: What Works and What Doesn't

Henk van Elburg, SenterNovem

Breaking Down the Barriers to Efficiency Improvements in the Rental Housing Market: One Utility's Approach

Michael Volker, Midwest Energy, Inc.

Katherine Johnson, Market Development Group

Best Practices and Lessons Learned from EPA/DOE's Home Performance with ENERGY STAR Program

Chandler Von Schrader, U.S. Environmental Protection Agency

Dale Hoffmeyer, U.S. Environmental Protection Agency
Patricia Pimpton, Navigant Consulting, Inc.
Ed Thomas, Market Development
Katherine Johnson, Market Development

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

Variable Refrigerant Flow: An Emerging Air Conditioner and Heat Pump Technology

K. R. (Ammi) Amarnath, Electric Power Research Institute
Morton Blatt, Consultant

Indoor Air Purification Technologies that Allow Reduced Outdoor Air Intake Rates While Maintaining Acceptable Levels of Indoor Air Quality

Cecilia Arzbaecher, Global Energy Partners, LLC
Patricia Hurtado, Global Energy Partners, LLC
K. R. (Ammi) Amarnath, Electric Power Research Institute

Energy Efficiency and the Control and Simulation of VAV Systems

Paul Bannister, Exergy Australia Pty Ltd

21st Century Cooling Strategies for Large Retail Facilities in Dry Climates

Richard Bourne, Western Cooling Efficiency Center
Scott D. Williams, Target Corporation
James McClendon, Wal-Mart

Common Boiler Excess Air Trends and Strategies to Optimize Efficiency

Kevin Carpenter, Energy & Resource Solutions
Kelly Kissock, University of Dayton
Chris Schmidt, Energy & Resource Solutions

Energy Design Guides for Army Barracks

Michael Deru, National Renewable Energy Laboratory
Alexander Zhivov, Construction Engineering Research Laboratory, Engineer Research and Development Center
Dale Herron, Construction Engineering Research Laboratory, Engineer Research and Development Center

Greening the U.S. House of Representatives

Rick Diamond, Lawrence Berkeley National Laboratory
Christopher T. Payne, Lawrence Berkeley National Laboratory
Grant Scherling, U.S. House of Representatives

How Accurate Is Energy Modeling in the Market?

Mark Frankel, New Buildings Institute
Cathy Turner, New Buildings Institute

Minnesota B3 Benchmarking Results: Prioritizing the Energy Savings Opportunity in Minnesota Public Buildings

Lara Greden, The Weidt Group
Tom McDougall, The Weidt Group
Leo Steidel, The Weidt Group
Janet Streff, Minnesota Department of Commerce

Up On the Roof: From the Past to the Future

Reid Hart, Portland Energy Conservation, Inc.
Dan Morehouse, Eugene Water & Electric Board
Will Price, Eugene Water & Electric Board
John Taylor, Consortium for Energy Efficiency
Howard Reichmuth, New Buildings Institute
Mark Cherniack, New Buildings Institute

Benchmarking and Equipment and Controls Assessment for a 'Big Box' Retail Chain

Philip Haves, Lawrence Berkeley National Laboratory
Brian Coffey, Lawrence Berkeley National Laboratory
Scott D. Williams, Target Corporation

The Importance of Integrated Design, Commissioning, and Building Tuning: A Grocery Store Case Study

Jonathan Heller, Ecotope, Inc.
David Baylon

Compressor Confusion: Field Findings on the Role of Supplemental Cooling in a Commercial Indirect Evaporative Air Conditioner

Cathy Higgins, New Buildings Institute
Howard Reichmuth, New Buildings Institute

Calibration and Collaboration: Important Tools to Design High-Performance Affordable Housing Buildings

Wei Jiang, Pacific Northwest National Laboratory
Bing Liu, Pacific Northwest National Laboratory
John Snell, Peregrine Energy Group
Dan Helmes, Boston Housing Authority

Design and Optimization of a Mixed Mode Raised Floor and Natural Ventilation System for a High Rise Office Building

Taylor Keep, Arup
Isabelle Lavedrine, Arup
James Woods, Arup

Evaluating the Performance and Economics of Transpired Solar Collectors for Commercial Applications

Eric Kozubal, National Renewable Energy Laboratory
Michael Deru, National Renewable Energy Laboratory
Steve Slayzak, National Renewable Energy Laboratory
Paul Norton, National Renewable Energy Laboratory
Greg Barker, Mountain Energy Partnership
James McClendon, Wal-Mart

Virtual Refrigerant Charge Sensor

Haorong Li, University of Nebraska-Lincoln
Jim Braun, Purdue University

Universal Energy Benchmarking for Commercial Buildings: Making It a Reality in California

Douglas Mahone, Heschong Mahone Group, Inc.
Karen Herter, Heschong Mahone Group, Inc.
Michael Langley, CA Dept. of General Services

Tracy Narel, U.S. Environmental Protection Agency

A Buildings Module for the Stochastic Energy Deployment System

Chris Marnay, Lawrence Berkeley National Laboratory
Michael Stadler, Lawrence Berkeley National Laboratory
Sam Borgeson, Lawrence Berkeley National Laboratory
Brian Coffey, Lawrence Berkeley National Laboratory
Ryoichi Komiyama, Lawrence Berkeley National Laboratory
Judy Lai, Lawrence Berkeley National Laboratory

Way Beyond Widgets: Delivering Integrated Lighting Design in Actionable Solutions

Michael A. Myer, Pacific Northwest National Laboratory
Eric Richman, Pacific Northwest National Laboratory
Carol Jones, Pacific Northwest National Laboratory

Wireless Sensor Technology for Data Centers

Richard Oberg, Sacramento Municipal Utility District (SMUD)
Ed Sanchez, Sacramento Municipal Utility District (SMUD)
Patricia Nealon, Synapsense Corporation

Avoiding Fluorescent Dimming Pitfalls for Daylight Harvesting

Conan O'Rourke, Lighting Research Center - Rensselaer Polytechnic Institute
Andrew Bierman, Lighting Research Center - Rensselaer Polytechnic Institute
Debbie Rowe, Rensselaer Polytechnic Institute

Development of Design Guidance for K-12 Schools: From 30% to 50% Energy Savings

Shanti Pless
Paul Torcellini, National Renewable Energy Laboratory
Nicholas Long, National Renewable Energy Laboratory

National Commercial Construction Characteristics and Compliance with Building Energy Codes: 1999-2007

Eric Richman, Pacific Northwest National Laboratory
Emily Rauch, Pacific Northwest National Laboratory
Jaclyn Phillips, Washington State University
Jessica Knappek, Columbia Basin Community College
Kimberly Petty, Washington State University
Priscilla Lopez-Rangel, Western Washington University

Field Testing of Commercial Rooftop Units Directed at Performance Verification

David Robison, Stellar Processes
Reid Hart, Portland Energy Conservation, Inc.
Will Price, Eugene Water & Electric Board
Howard Reichmuth, New Buildings Institute

Energy Implications of Economizer Use in California Data Centers

Arman Shehabi, Dept. of Civil and Environmental Engineering, UC Berkeley
Srirupa Ganguly, EETD, Lawrence Berkeley National Laboratory
Kim Traber, Rumsey Engineers
Hillary Price, Rumsey Engineers
Arpad Horvath, Dept. of Civil and Environmental Engineering, UC Berkeley
William W. Nazaroff, Dept. of Environmental Engineering, UC Berkeley

Ashok J. Gadgil, EETD, Lawrence Berkeley National Laboratory

Distributed Energy Resources On-Site Optimization for Commercial Buildings with Electric and Thermal Storage Technologies

Michael Stadler, Lawrence Berkeley National Laboratory

Hirohisa Aki, Lawrence Berkeley National Laboratory

Ryan Firestone, Summit Blue Consulting, LLC

Judy Lai, Lawrence Berkeley National Laboratory

Chris Marnay, Lawrence Berkeley National Laboratory

Afzal Siddiqui, Department of Statistical Science, University College London

Deep Energy Savings in a Small Office Building: The Southface Eco-Office Demonstration and Research Project

David M. Wasserman, Southface Energy Institute

DOE's Commercial Building Benchmarks — Development of Typical Construction Practices for Building Envelope and Mechanical Systems from the 2003 Commercial Building Energy Consumption Survey

David Winiarski, Pacific Northwest National Laboratory

Mark Halverson, Pacific Northwest National Laboratory

Wei Jiang, Pacific Northwest National Laboratory

4 – Commercial Buildings: Program Design, Implementation, and Evaluation

Comparison of Commercial LEED Buildings and Non-LEED Buildings within the 2002-2004 Pacific Northwest Commercial Building Stock

David Baylon, Ecotope, Inc.

Poppy Storm, Ecotope, Inc.

Collaborative for High Performance Schools (CHPS): The Process of Mainstreaming Efficiency in Action and the Evolution of CHPS

Haile Bucaneg, California Energy Commission

Risky Business: Development and Implementation of a Risk Assessment Strategy to Guide Program Evaluation

Hannah Carmalt, Energy Market Innovations, Inc.

Dan Schulte, Energy Market Innovations, Inc.

Eric Brateng, Puget Sound Energy

Harvesting Savings: Energy Efficiency Roots Sustainability in the Wine Industry

David Casentini

Lorna Rushforth, Resource Solutions Group

Tim Holmes, Kenwood Energy

Attribution Methodology Wars: Self-Report Methods versus Statistical Number Crunching — Which Should Win?

Gay Cook, Summit Blue Canada Inc.

Summing It Up: The National Action Plan's New Program Impact Evaluation Guide

Nikolaas Dietsch, U.S. Environmental Protection Agency

Steven R. Schiller, Schiller Consulting, Inc.

Targeted Marketing Strategies that Increase Energy Efficiency Program Participation of

Commercial Companies

Fred Dreher, Franklin Energy Services, LLC

Jan Peiffer, Franklin Energy Services, LLC

Judy Mathewson, We Energies

Preaching to the Choir: Are Repeat Participants Free Riders?

Jeff Erickson, Summit Blue Consulting, LLC

Building Lasting Partnerships: Program Strategies that Enamor Decision-Makers & Enable Savings in the Commercial Real Estate Office Sector

Jason Erwin, Consortium for Energy Efficiency

Kimberlie Lenihan, New York State Energy Research and Development Authority

Jack Davis, Northwest Energy Efficiency Alliance

Jean Bardeaux, Xcel Energy

Adapting to Serve the Commercial New Construction Market in Oregon

Thomas Giffin, SAIC

Spencer Moersfelder, Energy Trust of Oregon, Inc.

Quantifying the “Real World” Impacts of Early Design Involvement and the Implications for New Construction Program Design, Implementation and Evaluation

Kevin Grabner, Energy Center of Wisconsin

Pravin Bhiwapurkar, Energy Center of Wisconsin

Tate Walker, Energy Center of Wisconsin

A Market-Based Approach to Energy Efficiency in Hospitality

Mindy Guilfoyle, Focus on Energy / Franklin Energy

Matthew Matenaer, Focus on Energy / Franklin Energy

Designing a Successful Demand Response Program: It’s Not Your Grandfather’s Load Control Program

Carmen Henrikson, EnerNOC, Inc.

Kristin Brief, EnerNOC, Inc.

Transforming the Practices of Building Operation and Maintenance Professionals: A Washington State Pilot Program

Srinivas Katipamula, Battelle, Pacific Northwest Division

Michael R. Brambley, Battelle, Pacific Northwest Division

Streamlining the Small New Construction Market: A Prescriptive Approach to Comprehensive Savings with Core Performance

Jonathan Kleinman, CLEAResult Consulting, Inc.

Jay Pilliod, Vermont Energy Investment Corporation

Mark Frankel, New Buildings Institute

Matt Socks, Optimal Energy, Inc.

Retrocommissioning: A Persistence Study

Umamaheswar Krishnan, Nexant, Inc.

Aniruddha Duttagupta, Nexant, Inc.

Alan Ahrens, CenterPoint Energy

What’s Cooking? Commercial Building Trends in the Food Services Industry

Lark Lee, PA Consulting

Carol Sabo, PA Consulting

Tsosie Reyhner, Pacific Gas and Electric Company

From Resource Acquisition to Relationships: How Energy Efficiency Initiatives Can Work Effectively with Large Commercial & Industrial Customers

Jeffrey Loiter, Optimal Energy, Inc.

Eric Belliveau, Optimal Energy, Inc.

Jonathan Kleinman, Optimal Energy, Inc.

Dan Gaherty, Efficiency Vermont

Gillian Eaton, Vermont Energy Investment Corporation

Two Contrasting Markets & Approaches: Promoting Efficiency in the Province of New Brunswick and New England

Brian McCowan, ERS Consulting

Dan Birleanu, Energy & Resource Solutions

Doug Baston, North Atlantic Energy Advisors

Gabe Arnold, Efficiency Vermont

Tom Coughlin, National Grid

Making the Leap: Data and Lessons Learned from Scaling Up Retrocommissioning Programs

Emily Moore, Portland Energy Conservation, Inc.

Eliot Crowe, Portland Energy Conservation, Inc.

Allison Robbins, Portland Energy Conservation, Inc.

Becky Walker, Portland Energy Conservation, Inc.

Building and Remodeling a New Construction Program

Zachary Obert, Wisconsin Energy Conservation Corp.

Carter Dedolph, Wisconsin Energy Conservation Corp.

From Single Commercial Buildings to Portfolios: Streamlining LEED® Documentation for Volume Customers

Mike Opitz, U.S. Green Building Council

The Divergence Problem — Meeting “AIA 2030 Challenge” Standards with Existing Buildings: A New York City Tenant Case Study

Julian Parsley, Buro Happold Consulting Engineers PC

Steven Baumgartner, Buro Happold Consulting Engineers PC

Energy Efficient Lighting in Historic Buildings

Barbara Smith, Wisconsin Division of Energy Services

Cheryl Rezabek, Wisconsin Division of State Facilities

Jim Mapp, Wisconsin Division of Energy Services

Jim Cavallo, Kouba-Cavallo Associates

Scoring Our Schools: Program Implementation Lessons-Learned from Benchmarking Over 1,775 Schools for Seven Utilities

Jim Stimmel, CLEAResult Consulting, Inc.

Jessica Gohs, CLEAResult Consulting, Inc.

DOE Commercial Building Benchmark Models

Paul Torcellini, National Renewable Energy Laboratory

Michael Deru, National Renewable Energy Laboratory

Brent Griffith, National Renewable Energy Laboratory

Kyle Benne, National Renewable Energy Laboratory

Mark Halverson, Pacific Northwest National Laboratory
David Winiarski, Pacific Northwest National Laboratory
Drury Crawley, U.S. Department of Energy

The Commercial Building Market Structure: An Act with Five Players

Peter Turnbull, Pacific Gas and Electric Company
John H. Reed, Innovologie

Green Building Performance Evaluation: Measured Results from LEED New Construction Buildings

Cathy Turner, New Buildings Institute
Mark Frankel, New Buildings Institute

Barriers to Greater Energy Efficiency within the Building Industry

Constant Van Aerschot, Lafarge

International Cooperation to Scale Up Adoption of High-Performance Buildings: From Novel to Normal

Laura Van Wie McGrory, Lawrence Berkeley National Laboratory
Mark Ginsberg, U.S. Department of Energy
Joe Huang, White Box Technologies

The Evolution of a Successful Efficiency Program: Energy Savings Bid

Carrie Webber, KEMA, Inc.

Enhancing Price Response Programs through Auto-DR: California's 2007 Implementation Experience

Greg Wikler, Global Energy Partners, LLC
Albert Chiu, Pacific Gas & Electric Company
Mary Ann Piette, Lawrence Berkeley National Laboratory
Sila Kiliccote, Lawrence Berkeley National Laboratory
Dan Hennage, Akuacom, Inc.
Chuck Thomas, Electric Power Research Institute

Implementing a Resource Conservation Manager Program at Puget Sound Energy

Bill Younger, Puget Sound Energy
Lori Moen, Puget Sound Energy
Ted Brown, Puget Sound Energy
Bobbi Wilhelm, Puget Sound Energy

5 – Utility Regulation, Strategies, and Policies

Greater Impacts at Reasonable Costs: Setting and Meeting Energy Efficiency Resource Standards with Best Practices

Laura Agapay, Summit Blue Consulting, LLC
Randy Gunn, Summit Blue Consulting, LLC

Walking the Walk: Considering Non-Transmission Alternatives in Utility Planning, Part Deux

Bruce Bentley, Central Vermont Public Service Corporation
John Plunkett, Green Energy Economics Group

Assessment of White Certificate Schemes in Europe

Paolo Bertoldi, European Commission
Silvia Rezessy, European Commission

Integration of Retail Demand Response with Midwest ISO Wholesale Markets

Ranjit Bharvirkar, Lawrence Berkeley National Laboratory
Charles Goldman, Lawrence Berkeley National Laboratory
Grayson Heffner, Global Energy Associates
Richard Sedano, Regulatory Assistance Project

A Blueprint for Re-Building a World Class Conservation Power Plant: Releasing the Hidden Dragon

Robert Bordner, Energy Market Innovations, Inc.
Robert Balzar, Seattle City Light

Quantitative Financial Analysis of Alternative Energy Efficiency Program Incentive Mechanisms

Peter Cappers, Lawrence Berkeley National Laboratory
Charles Goldman, Lawrence Berkeley National Laboratory
Michele Chait, Energy and Environmental Economics, Inc.
George Edgar, Consultant
Jeff Schlegel, Consultant
Wayne Shirley, Regulatory Assistance Project

Shifting the Paradigm to Achieve Big, Bold Energy-Efficiency Initiatives in California

Karin Corfee, KEMA, Inc.

Moving to New Regulatory Frameworks that Leverage Market Forces to Maximize Societal Uptake of Energy Efficiency

Rafael Friedmann, Pacific Gas and Electric Company
James Perich-Anderson, Pacific Gas and Electric Company

DSM Implementation Contracts and Stakeholder Advisory Groups: Considerations for DSM Program Managers

Toben Galvin, Summit Blue Consulting, LLC
Stuart Slote, Summit Blue Consulting, LLC

On-Bill Financing of Small Business Energy Efficiency: An Evolving Success Story

Nikhil Gandhi, Strategic Energy Technologies, Inc.
Paul Gray, United Illuminating Company
Dennis O'Connor, United Illuminating Company
Randall Vagnini, Connecticut Light and Power Company
Kim Kiernan, Western Massachusetts Electric Company
Sharon Baggett, Sharon Baggett & Associates

Collaborating for Success: How Arkansas Got It Right

Glenn Garland, CLEARResult Consulting, Inc.

Update on Utility Energy Efficiency Programs in the Southwest

Howard Geller, Southwest Energy Efficiency Project
Jeff Schlegel, Southwest Energy Efficiency Project

Review of Recent Midwest DSM Potential Studies

Randy Gunn, Summit Blue Consulting, LLC
Laura Agapay, Summit Blue Consulting, LLC

Taking the Efficiency Utility Model to the Next Level

Blair Hamilton, Vermont Energy Investment Corporation

Playing with the Big Boys: Energy Efficiency as a Resource in the ISO New England Forward

Capacity Market

Cheryl Jenkins, Vermont Energy Investment Corporation
Blair Hamilton, Vermont Energy Investment Corporation
Chris Neme, Vermont Energy Investment Corporation

Integrating Risk Assessment into Energy Efficiency Program Portfolio Design

Peter Lemoine, ICF International
Kapil Kulkarni, ICF International
Tyler Huebner, ICF International
Val Jenson, ComEd

Deal or No Deal? Pros and Cons of Trading under an Energy Efficiency Resource Standard

Joe Loper, Alliance to Save Energy
Jeffrey Harris, Alliance to Save Energy
Lowell Ungar, Alliance to Save Energy
Steve Capanna, Alliance to Save Energy
Selin Devranoglu, Alliance to Save Energy

Fast Capacity Reduction through Geographically Targeted, Aggressive Efficiency Investment: Early Results from a Vermont Experiment

James Massie, Vermont Energy Investment Corporation
Nancy Wasserman, Vermont Energy Investment Corporation
Blair Hamilton, Vermont Energy Investment Corporation

The Development of an Evaluation, Measurement and Verification Forum for the Northeast Region

Julie Michals, Northeast Energy Efficiency Partnerships, Inc.
Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.

Free-Ridership Measurement Is Out of Sync with Program Logic... or, We've Got the Structure Built, but What's its Foundation?

Jane Peters, Research Into Action, Inc.
Marjorie McRae, Research Into Action, Inc.

A Method for Deriving an Empirical Hourly Base Load Shape from Utility Hourly Total Load Records

Howard Reichmuth, New Buildings Institute

DSM Potential Studies Are Alive and Well and Living in Canada

Paul Robillard, Marbek Resource Consultants Ltd.
Dave Shipley, Marbek Resource Consultants Ltd.
Christine Gustafson, BC Hydro Power Smart

Assessment of Achievable Potential for Energy Efficiency and Demand Response in the U.S. (2010—2030)

Ingrid Rohmund, Global Energy Partners, LLC
Greg Wikler, Global Energy Partners, LLC
Ahmad Faruqui, The Brattle Group
Omar Siddiqui, Electric Power Research Institute
Rick Tempchin, Edison Electric Institute

Collaborative Two-Part AMI Programs for Demand Response and Energy Efficiency

Andy Satchwell, Indiana Office of Utility Consumer Counselor
Joan Soller, Indiana Office of Utility Consumer Counselor

TOU Rates As If Prices Mattered: Reviving an Industry Standard for Today's Utility Environment

Stuart Schare, Summit Blue Consulting, LLC

Taking It to the Streets: Innovative Public Engagement Process on Vermont's Electricity Future

Richard Sedano, Regulatory Assistance Project

Jonathan Raab, Raab Associates, Ltd.

Laying the Foundation for Energy Efficiency Potential Estimates Through Market Assessment

Mark Thompson, Forefront Economics Inc.

Howard Reichmuth, New Buildings Institute

H. Gil Peach, H. Gil Peach and Associates

Debating Net Versus Gross Impacts in the Northeast: Policy and Program Perspectives

Elizabeth Titus, Northeast Energy Efficiency Partnerships, Inc.

Julie Michals, Northeast Energy Efficiency Partnerships, Inc.

Strategies and Policies for Improving Energy Efficiency Programs: Closing the Loop Between Evaluation and Implementation

Edward Vine, California Institute for Energy and Environment/Lawrence Berkeley National Laboratory

Creating Regulatory Structures for Robust Demand Response Participation in Organized Wholesale Electric Markets

Jon Wellinghoff, Federal Energy Regulatory Commission

David L. Morenoff, Federal Energy Regulatory Commission

James Pederson, Federal Energy Regulatory Commission

Mary Elizabeth Tighe, Federal Energy Regulatory Commission

What's Working Well: Lessons from a National Review of Exemplary Energy Efficiency Programs

Dan York, American Council for an Energy-Efficient Economy

Martin Kushler, American Council for an Energy-Efficient Economy

6 – Market Transformation: Taking Efficiency Mainstream

Transforming Ourselves While Transforming the Market: Turning Technical Expertise into the *Consumer Guide to Home Energy Savings*

Katie Ackerly, American Council for an Energy-Efficient Economy

Jennifer Amann, American Council for an Energy-Efficient Economy

Glee Murray, American Council for an Energy-Efficient Economy

Sarah Black, American Council for an Energy-Efficient Economy

Walking the Aisles: Designing Research to Understand CFL Purchase Motivations at the Time of Sale

Jennifer E. Canseco, KEMA, Inc.

Kathleen Gaffney, KEMA, Inc.

Kevin Price, KEMA, Inc.

Estimating Energy Savings for a Commercial Market Transformation Initiative

Cathy Chappell, Heschong Mahone Group, Inc.

David Cohan, Northwest Energy Efficiency Alliance

Case Study: The Effectiveness of Zero Energy Home Strategies in the Marketplace

Bill Dakin, Davis Energy Group, Inc.

David Springer, Davis Energy Group, Inc.

Bill Kelly, SunPower Corporation

Cooking Up a New Approach for Program Design II: A Recipe for Success

Kim Erickson, Consortium for Energy Efficiency
Afroz Khan, Consortium for Energy Efficiency
Marilyn Dare, New York State Research and Development Authority
Andy Doeschot, Pacific Gas and Electric Company
Al Dietemann, Seattle Public Utilities
Ella Abadir, Southern California Gas Company
Kate Lewis, U.S. Environmental Protection Agency
Mindy Guilfoyle, Wisconsin Focus on Energy

CFLs, Mercury and Mayhem! The Energy Efficiency Community Responds

Vicki Fulbright Calwell, Ecos Consulting
Peter Banwell, U.S. Environmental Protection Agency

Changing Behaviors: Market Transformation Web Sites as Online Narrative

David Hicks, National Renewable Energy Laboratory and University of Colorado—Boulder

Industry-Led Market Transformation

Ian Jarvis, EnerLife Consulting
Marion Fraser, Fraser & Company

Industry Scalable Commercial Lighting Solutions for the Mainstream Market

Carol Jones, Pacific Northwest National Laboratory
Sucheta Puranik, Booz Allen Hamilton

It's the Size of the Reduction Target, Stupid! The Need for a Wholesale Re-Think of Energy Efficiency Policy in UK Housing

Gavin Killip, Environmental Change Institute, University of Oxford

Transforming the Residential Buildings Market through High Performance Homes and a National Home Performance Label: The DOE Builders Challenge

James Lyons, U.S. Department of Energy/Newport Partners LLC
Ed Pollock, U.S. Department of Energy/Newport Partners LLC
Joe Nebbia, U.S. Department of Energy/Newport Partners LLC

LED Lighting: Applying Lessons Learned from the CFL Experience

Jeff McCullough, Pacific Northwest National Laboratory
T.L. Gilbride, Pacific Northwest National Laboratory
L.J. Sandahl, Pacific Northwest National Laboratory
K.L. Gordon, Pacific Northwest National Laboratory
M.R. Ledbetter, Pacific Northwest National Laboratory
M.K. Ton, Pacific Northwest National Laboratory

Greening Leased Spaces: Opportunities and Challenges

Craig McDonald, Navigant Consulting, Inc.
Sean Ivery, Navigant Consulting, Inc.
Claire M. Gagne, Navigant Consulting, Inc.
Kif Scheuer, Strategic Energy Innovations

Market Penetration of ENERGY STAR Qualified Appliances: An Analysis of Various Predictor Variables

Bill McNary, D&R International, Ltd.

Magical Mystery Devices or Not: How Do LED Lamps and Luminaires Really Measure-Up?

Mia Paget, Pacific Northwest National Laboratory

Jeff McCullough, Pacific Northwest National Laboratory

Heidi Steward, Pacific Northwest National Laboratory

80 PLUS: Market Impacts and Lessons Learned

Ryan Rasmussen, Ecos Consulting

Geoff Wickes, Ecos Consulting and Industrial Efficiency Alliance

Are We There Yet? An Assessment of a Decade of Lighting Market Transformation Efforts

Tami Rasmussen, KEMA, Inc.

Anu Teja, Northwest Energy Efficiency Alliance

Jennifer E. Canseco, KEMA, Inc.

ENERGY STAR Quantity Quotes: A New Tool for Reaching Large Purchasers of Energy-Efficient Products

Ari Reeves, D&R International, Ltd.

Matthew R. Jones, D&R International, Ltd.

Dana Zipser Schallheim, D&R International, Ltd.

Jacob Skaggs, D&R International, Ltd.

Lani MacRae, U.S. Department of Energy

ENERGY STAR Qualified Fixtures See the Light of Day: How the Puget Sound Effort Changed the Market

Jill Reynolds, Ecos Consulting

Sheryl Bunn, Ecos Consulting

Emily Pearce, Ecos Consulting

Kathy Mann, Ecos Consulting

Sheila McElhinney, Ecos Consulting

A Bright Idea in Commercial Lighting: New Brunswick's Success with an Upstream Incentive Approach

Robin Rocca, Efficiency New Brunswick

Gabe Arnold, Efficiency Vermont

Selling Efficiency amid the Green Revolution: Innovative Marketing Approaches at Three Statewide Efficiency Programs

Chris Schultz-Buechner, Wisconsin Energy Conservation Corporation

Leigh Winterbottom, Vermont Energy Investment Corporation

Jan Schaeffer, Energy Trust of Oregon

Market Transformation and Guiding Principles of Sustainability

Paul Sheldon, Ecos Consulting

Michael Rendon, Ecos Consulting

The Greening of Retail: Opportunities for Increased Retail Engagement on Energy Efficiency

Anna Siefken, ICF International

Jill Vohr, U.S. Environmental Protection Agency

Hewan Tomlinson, U.S. Environmental Protection Agency

Lindsey Gertler, ICF International

Residential Building Code Change: Market Transformation Success, Back to the Beginning for ENERGY STAR Homes Program Implementation

Kendall Youngblood, Energy Trust of Oregon
Anne Brink, Northwest Energy Efficiency Alliance
Brady Peeks, Energy Trust of Oregon

Impacts of Advertising on Market Transformation: A Case Study of PG&E's 2007 CFL Marketing Campaign

Barbara Wingate, Pacific Gas & Electric Company
Jennifer E. Canseco, KEMA, Inc.

7 – Human and Social Dimensions of Energy Use: Trends and their Implications

Is Climate Change a Good Thing? Opportunities and Barriers to Using Climate Change to Motivate Efficiency

Ingo Bensch, Energy Center of Wisconsin

The Power of Point-of-Purchase Signage

Stephen E. Bickel, D&R International, Ltd.
Ari Reeves, D&R International, Ltd.
Bill McNary, D&R International, Ltd.
Richard P. Karney, U.S. Department of Energy

A High Energy Diet: The Impact of Lifestyle Changes on Energy Consumption in Food Sales and Food Service

Sarah Black, American Council for an Energy-Efficient Economy
Karen Ehrhardt-Martinez, American Council for an Energy-Efficient Economy

Engaging Occupants in Green Building Performance: Addressing the Knowledge Gap

Zosia B. Brown, Institute for Resources Environment and Sustainability, UBC
Raymond J. Cole, School of Architecture and Landscape Architecture, UBC

Transforming Energy Behaviors of Households: Evidence from Low-Income Energy Education Programs

David Carroll, APPRISE
Jacqueline Berger, APPRISE

A Plea for Simpler Electricity Tariffs

Philip E. Coleman, Lawrence Berkeley National Laboratory
Christopher T. Payne, Lawrence Berkeley National Laboratory
Richard G. White, Lawrence Livermore National Laboratory

Why, What, When, How, Where, and Who? Developing UK Policy on Metering, Billing and Energy Display Devices

Sarah Darby, Environmental Change Institute, University of Oxford

Dollars or Sense: Economic versus Social Rationality in Residential Energy Consumption

Karen Ehrhardt-Martinez, American Council for an Energy-Efficient Economy
John A. "Skip" Laitner, American Council for an Energy-Efficient Economy
Wendy Reed, Consultant

Energy Efficiency Portfolio of the Future

William Goetzler, Navigant Consulting, Inc.
Craig McDonald, Navigant Consulting, Inc.
Ganesh Venkat, Southern California Gas Company

Tackling Efficiency Paradoxes: Responses to “Energy-Efficient” 10,000 sq. ft. Houses and 50-inch Televisions

Christopher Granda, Vermont Energy Investment Corporation
Margie Lynch, Consortium for Energy Efficiency
Sam Rashkin, U.S. Environmental Protection Agency

Towards Adaptive PMV/PPD Indices for European Climates...

Laurent Grignon-Massé, Ecole Nationale Supérieure des Mines de Paris
Jérôme Adnot, Ecole Nationale Supérieure des Mines de Paris
Philippe Rivière, Ecole Nationale Supérieure des Mines de Paris

Engaging Employees in Conservation Leadership

Christine Gustafson, BC Hydro Power Smart
Margo Longland, BC Hydro Power Smart

Energy Efficiency and Changes in Energy Demand Behavior

Marvin Horowitz, Demand Research LLC

Implications of Ownership in the U.S. and U.K.: An Exploration of ENERGY STAR[®] Buildings & the Energy Efficiency Accreditation Scheme

Kathryn Janda, Environmental Change Institute, Oxford University

Teaching Customers to Value Energy Efficiency: A Comparison of CFL Fund Raisers

Katherine Johnson, Market Development Group
Ed Thomas, Market Development Group

Communicating Thermostats for Residential Time-of-Use Rates: They Do Make a Difference

Mary Klos, Summit Blue Consulting, LLC
Jeff Erickson, Summit Blue Consulting, LLC
Elaine Bryant, Public Service Electric and Gas Company
Susan Lacey Ringhof, Public Service Electric and Gas Company

The “Average American” Unmasked: Social Structure and Differences in Household Energy Use and Carbon Emissions

Loren Lutzenhiser, Portland State University
Sylvia Bender, California Energy Commission

Reaching Business and Industry: Lessons from 30 Years of Process Evaluation

Marjorie McRae, Research Into Action, Inc.
Jane S. Peters, Research Into Action, Inc.

Incorrect Business Assumptions and Misappropriation of Cooling Resources, or Why Do We Bring Sweaters to Movie Theaters in the Summer?

Michael Mendelsohn, Western Resource Advocates

Segmenting Residential Customers: Energy and Conservation Behaviors

Marc Pedersen, BC Hydro

A Tale of Two Houses: The Human Dimension of Demand Response Enabling Technology from a Case Study of an Adaptive Wireless Thermostat

Therese Peffer, Architecture Dept., UC Berkeley
Edward Arens, Architecture Dept., UC Berkeley
Xue Chen, Mechanical Engineering Dept., UC Berkeley
Jaehwi Jang, Mechanical Engineering Dept., UC Berkeley
David Auslander, Mechanical Engineering Dept., UC Berkeley

An End-Use Intensity Study of the Residential Sector

Mark Rebman, BC Hydro
Min Yu, BC Hydro

Breaking Down Silos: Bridging the Communications and Knowledge Gap between Departments to Implement Energy Efficiency in the Public Sector

Alan Rose, CLEAResult Consulting, Inc.
Jim Stimmel, CLEAResult Consulting, Inc.
John Oyhenart, CLEAResult Consulting, Inc.
Alan Ahrens, CenterPoint Energy

Assessing the Impact of Behavioral Energy Efficiency Measures: A Simulation Approach

Robert Russell, Northwest Energy Efficiency Alliance
Christian Miner, Northwest Energy Efficiency Alliance

Behaviour and Energy Savings in Residential Dwellings

Ron Sahota, BC Hydro
Iris Sulyma, Power Smart, BC Hydro
Ken Tiedemann, BC Hydro
Jack Habart, Habart & Associates

Property Agents in the UK: Some Reflections on the Social Production of Desirable Space

Pernille Schiellerup, Environmental Change Institute, University of Oxford Centre for the Environment
Julie Gwilliam, Welsh School of Architecture, University of Cardiff

Appliance Energy Use in America's Second Home: The Automobile

Valerie Thomas, Georgia Institute of Technology
Alan Meier, Lawrence Berkeley National Laboratory
Thomas Wenzel, Lawrence Berkeley National Laboratory
Siva Gunda, University of California, Davis

Segmentation in a Mass Media Energy Campaign

Patricia Thompson, Summit Blue Consulting, LLC
Jane Hummer, Summit Blue Consulting, LLC
David Hungerford, California Energy Commission
Bridgette Braig, Braig Consulting

Behavior and Energy Savings in Business Establishments

Ken Tiedemann, BC Hydro
Iris Sulyma, Power Smart, BC Hydro
Ron Sahota, BC Hydro
Jack Habart, Habart & Associates

Welcome to your Home Energy Makeover

Amy Wollangk, Wisconsin Energy Conservation Corporation
Chris Schultz-Buechner, Wisconsin Energy Conservation Corporation

8 – Energy and Environmental Policy: Planning for Greater Impacts

Pursuing Energy Efficiency as a Hedge against Carbon Regulatory Risks: Current Resource Planning Practices in the West

Galen Barbose, Lawrence Berkeley National Laboratory
Ryan Wiser, Lawrence Berkeley National Laboratory
Amol Phadke, Lawrence Berkeley National Laboratory
Charles Goldman, Lawrence Berkeley National Laboratory

The International State of Building System Commissioning

Natascha Castro, National Institute of Standards and Technology
Nobuo Nakahara, Building Services Commissioning Association
Harunori Yoshida, Kyoto University

Leading by Example: Streamlining EE in the Local Government Sector

Bruce Chamberlain, Energy Solutions
Gerald Lahr, Association of Bay Area Governments
Marvin Nushwat, Pacific Gas and Electric Company

Leading the Way: BPA's Efforts to Accelerate Energy Efficiency in the Northwest

Kevin Cooney, Summit Blue Consulting, LLC
Jane Pater, Summit Blue Consulting, LLC
Karen Meadows, Bonneville Power Authority

Standards Education and Training Program as a Resource Program

Patrick Eilert, Pacific Gas and Electric Company
Charles Segerstrom, Pacific Gas and Electric Company
Gary Fernstrom, Pacific Gas and Electric Company
Stephanie Stern, Energy Solutions
Yanda Zhang, Heschong Mahone Group, Inc.
Misti Bruceri, Misti Bruceri and Associates

State-Level Energy Efficiency Analysis: Goals, Methods and Lessons Learned

Maggie Eldridge, American Council for an Energy-Efficient Economy
R. Neal Elliott, American Council for an Energy-Efficient Economy
Max Neubauer, American Council for an Energy-Efficient Economy

Estimating National Carbon Savings Potential from Electricity Demand Reduction in Buildings

Dean Gamble, ICF International
William Grayson, ICF International

Boulder's Carbon Tax: Building a Foundation for Community Climate Action

Yael Gichon, City of Boulder
Kevin Afflerbaugh, City of Boulder
Andrew Bascue, City of Boulder
Sarah Van Pelt, City of Boulder

Beyond Supply Curves

Fred Gordon, Energy Trust of Oregon
Lakin Garth, Energy Trust of Oregon
Tom Eckman, Northwest Power and Conservation Council
Charlie Grist, Northwest Power and Conservation Council

International Comparison of Energy Efficiency Standard and Labels: Development Process and Implementation Phase

Sho Hirayama, Jyukankyo Research Institute, Inc.
Hidetoshi Nakagami, Jyukankyo Research Institute, Inc.
Chiharu Murakoshi, Jyukankyo Research Institute, Inc.
Mikiko Nakamura, Jyukankyo Research Institute, Inc.
Suguru Mizutani, Jyukankyo Research Institute, Inc.
Shuji Okuda, Stanford University

Savings Estimates for the United States Environmental Protection Agency's ENERGY STAR Voluntary Product Labeling Program

Gregory Homan, Lawrence Berkeley National Laboratory
Richard Brown, Lawrence Berkeley National Laboratory
Marla Sanchez, Lawrence Berkeley National Laboratory
Carrie Webber, Lawrence Berkeley National Laboratory

A Comparison of Per-Capita Electricity Consumption in the United States and California

Adrienne Kandel, California Energy Commission
Margaret Sheridan, California Energy Commission
Patrick McAuliffe, California Energy Commission

Closing the Gap on Building Energy Codes to Achieve Carbon Reductions

Aleisha Khan, Building Codes Assistance Project
Kym Willock, Building Codes Assistance Project
Alecia Ward, Midwest Energy Efficiency Alliance
Greg Ehrendreich, Midwest Energy Efficiency Alliance

Japan's Residential Energy Demand Outlook to 2030 Considering Energy Efficiency Standards "Top-Runner Approach"

Ryoichi Komiyama, Lawrence Berkeley National Laboratory
Chris Marnay, Lawrence Berkeley National Laboratory

Utility Codes and Standards Programs: How Much Energy Do They Save?

Allen Lee, The Cadmus Group
Hossein Haeri, The Cadmus Group
Ayat Osman, California Public Utilities Commission
Ken Keating, CPUC Master Evaluation Contractor Team
John Stoops, RLW Analytics, Inc.

Adaptive Climate Protection Policy: Designing a Market-Based Instrument to Promote the Emergence of Carbon-Neutral, Green Buildings

Vinh Mason, City of Portland Office of Sustainable Development

Mandates for Maximizing Cost-Effective Measures in Building Energy Codes: The Promise and Pitfalls during Times of Rapid Evolution

Jonathan McHugh, McHugh Energy
Douglas Mahone, Heschong Mahone Group, Inc.
Yanda Zhang, Heschong Mahone Group, Inc.
Steve Blanc, Pacific Gas and Electric Company
Patrick Eilert, Pacific Gas and Electric Company
Jerine Ahmed, San Diego Gas & Electric and Southern California Gas Company
Lance Delaura, San Diego Gas & Electric and Southern California Gas Company

Randall Higa, Southern California Edison

Is Energy Efficiency Enough? An Exploration of California's Per Capita Electricity Consumption Trends

Cynthia Mitchell, Energy Economics, Inc.
Reuben Deumling, Energy Economics, Inc.
Gill Court, Energy Economics, Inc.

International Comparison of Household Energy Consumption and its Indicator

Hidetoshi Nakagami, Jyukankyo Research Institute, Inc.
Chiharu Murakoshi, Jyukankyo Research Institute, Inc.
Yumiko Iwafune, Jyukankyo Research Institute, Inc.

Giving Credit Where Credit Is Due: Energy Efficiency in CO₂ Emissions Trading

David Nemtzow, Nemtzow & Associates
Omar Siddiqui, Electric Power Research Institute

Not Just Energy Savings: Emerging Regulatory Challenges from the Implementation of Tradable White Certificates

Marcella Pavan, Italian Regulatory Authority for Electricity and Gas (AEEG)

The New Landscape for Appliance Efficiency Standards

Ted Pope, Energy Solutions
Alex Chase, Energy Solutions
Patrick Eilert, Pacific Gas and Electric Company
Gary Fernstrom, Pacific Gas and Electric Company

Energy Efficiency, Emissions, and Policy: Strengthening the Links

Eric Rambo, PA Consulting Group
David Sumi, PA Consulting Group
Bryan Ward, PA Consulting Group
Oscar Bloch, Wisconsin Public Service Commission

Bringing End-Use Energy Efficiency to the European Emissions Trading Scheme: Outlook for the Third Trading Period

Silvia Rezessy, European Commission, DG JRC, Institute for Energy
Paolo Bertoldi, European Commission, DG JRC, Institute for Energy
Monique Voogt, Ecofys International

Meeting GHG Emissions Reductions Goals While Keeping the Lights On: The Role of Energy Efficiency

Ignacio Rodriguez, PA Consulting Group
Matt Dathan, PA Consulting Group
Rafael Friedmann, Pacific Gas and Electric Company

Energy Efficiency as the First Resource: Opportunities, Challenges, and Beating the Next Bust

Michael Rufo, Itron Inc.
Michael Ting, Itron Inc.
Michael Messenger, Itron Inc.
Michael Wheeler, California Public Utilities Commission

Energy Efficiency and Emission Trading Schemes

Joel Sandersen, Orion Energy Systems

Ryan Holl, Orion Energy Systems
Stephen Heins, Orion Energy Systems

Energy Efficiency and Climate Change Mitigation Policy

Steven R. Schiller, Schiller Consulting, Inc.
William Prindle, ICF International
Richard Cowart, Regulatory Assistance Project
Arthur H. Rosenfeld, California Energy Commission

Coming Climate Change Policy and the Effect on Energy Efficiency

Frank Stern, Summit Blue Consulting, LLC
Nicole Wobus, Summit Blue Consulting, LLC
Jane Pater, Summit Blue Consulting, LLC

The Sustainability and Costs of Increasing Efficiency Impacts: Evidence from Experience to Date

Kenji Takahashi, Synapse Energy Economics
David Nichols, Synapse Energy Economics

9 – Strategies for Appliances, Lighting, Electronics, and Miscellaneous End–Uses

Energy Savings Estimates of Light Emitting Diodes in Niche Lighting Applications

Diana Burk, Navigant Consulting, Inc.
Brinda Thomas, Navigant Consulting, Inc.
Michael Scholand, Navigant Consulting, Inc.
James R. Brodrick, U.S. Department of Energy

Consumer Electronics Efficiency Programs: The Next Big Challenge

Alex Chase, Energy Solutions
Ted Pope, Energy Solutions
David Canny, Pacific Gas and Electric Company

How the Enforcement of MEPS in Australia Has Led to a Paradigm Shift in Supplier Attitudes

Rachael Clarke, Department of the Environment, Water, Heritage and the Arts
Shane Holt, Department of the Environment, Water, Heritage and the Arts

Lighting the Great Outdoors: LEDs in Exterior Applications

Tyson Cook, Energy Solutions
Mary Bryan, Pacific Gas and Electric Company
Bruce Kinzey, Pacific Northwest National Laboratory
Michael Myer, Pacific Northwest National Laboratory

A New "Twist" on a CFL Program: How One Utility Capitalized on a Creative Approach

Anne Ducey, Seattle City Light

The State of Solid State Lighting: What Programs Need to Know

Eileen Eaton, Consortium for Energy Efficiency
Michael Russom, Efficiency Vermont
David Alexander, Pacific Gas and Electric Company
Mary Matteson Bryan, Pacific Gas and Electric Company
Daryl DeJean, Pacific Gas and Electric Company

Big Savings for Small Grocery Stores

Ramin Faramarzi, Southern California Edison
Rafik Sarhadian, Southern California Edison
Devin Rauss, Southern California Edison

Case Studies in Restaurant Water Heating

Donald Fisher, Fisher-Nickel, Inc.
William Pietrucha, Pacific Gas and Electric Company

Halving Residential Lighting Energy Use by 2020: What a Multi-Stakeholder Target and Approach Means for Efficiency Programs

Rebecca Foster, Consortium for Energy Efficiency

The Role of State Programs in Promoting New Energy Efficient Technologies

Nick Hall, TecMarket Works
Jim Mapp, Wisconsin Division of Energy Services
Don Hynek, Wisconsin Division of Energy Services
Barbara Smith, Wisconsin Division of Energy Services
Cheryl Rezabek, Wisconsin Division of State Facilities

Canadian Standby Power Study of Consumer Electronics and Appliances

Gary Hamer, BC Hydro
Katherine Delves, Natural Resources Canada, Office of Energy Efficiency
Isabelle Saint-Laurent, Natural Resources Canada
Nathalie Péloquin, Environment Canada
Michael Vladimer, Navigant Consulting, Inc.
Michael Scholand, Navigant Consulting, Inc.

Standby Power: Building a Coherent International Policy Framework

Lloyd Harrington, Energy Efficient Strategies
Hans-Paul Siderius, SenterNovem
Mark Ellis, International Energy Agency

Market Effects: Claim Them Now or Forever Hold Your Peace

Lynn Hoefgen, Nexus Market Research, Inc.
Susan Oman, Nexus Market Research, Inc.
Angela Li, National Grid
Gail Azulay, NSTAR
Ralph Prael, Prael & Associates

New California PIER R&D Product Introduction Process

Karl Johnson, California Institute for Energy and Environment and University of California Office of the President
Norm Bourassa, California Energy Commission
Michael Seaman, California Energy Commission

Accelerating the Adoption of Energy Efficient Business and Consumer Electronics

Wayne Krill, Pacific Gas and Electric Company
David Canny, Pacific Gas and Electric Company
Steve Bassill, QDI Strategies, Inc.
Mike Lukasiewicz, MX-Roads, Inc.

The Boom of Electricity Demand in the Residential Sector in the Developing World and the

Potential for Energy Efficiency

Virginie Letschert, Lawrence Berkeley National Laboratory
Michael A. McNeil, Lawrence Berkeley National Laboratory

Achieving Real Energy Savings through Consumer Electronics Programs

Margie Lynch, Consortium for Energy Efficiency
Rob Lee, BC Hydro
Tony Mauro, BC Hydro
Mark Michalski, New York State Energy Research and Development Authority

Preparing for the Sunset of Incandescent Bulbs

Jim Mapp, Wisconsin Division of Energy Services
Barbara Smith, Wisconsin Division of Energy Services
Rebecca Foster, Consortium for Energy Efficiency

Low Power Mode Energy Use in California Homes

Alan Meier, Lawrence Berkeley National Laboratory
Bruce Nordman, Lawrence Berkeley National Laboratory

Quantifying the Effect of the Principal-Agent Problem on U.S. Residential Energy Use

Scott Murtishaw, California Public Utilities Commission
Jayant Sathaye, Lawrence Berkeley National Laboratory

Networks in Buildings: Which Path Forward?

Bruce Nordman, Lawrence Berkeley National Laboratory

Cool Retrofit Solutions in Refrigerated Display Cases

Devin Rauss, Southern California Edison
Scott Mitchell, Southern California Edison
Ramin Faramarzi, Southern California Edison

A Market Transformation Strategy for Gas-Fired Domestic Hot Water Heaters

Kara Rodgers, Consortium for Energy Efficiency
Joanne O'Donnell, Consortium for Energy Efficiency

U.S. Residential Miscellaneous Electric Loads Electricity Consumption

Kurt Roth, TIAX LLC
Kurtis McKenney, TIAX LLC
Chris Paetsch, TIAX LLC
Ratcharit Ponoum, TIAX LLC

The Advantages of Highly Controlled Lighting for Offices and Commercial Buildings

Francis Rubinstein, Lawrence Berkeley National Laboratory
Dmitriy Bolotov, Lawrence Berkeley National Laboratory
Mark Levi, U.S. General Services Administration
Kevin Powell, U.S. General Services Administration
Peter Schwartz, Peter Schwartz & Associates

EPA ENERGY STAR: Tackling Growth in Home Electronics and Small Appliances

Marla Sanchez, Lawrence Berkeley National Laboratory
Richard Brown, Lawrence Berkeley National Laboratory
Gregory Homan, Lawrence Berkeley National Laboratory

Saving More with ENERGY STAR

John Taylor, Consortium for Energy Efficiency
Edward Wisniewski, Consortium for Energy Efficiency
Maria Vargas, U.S. Environmental Protection Agency

An Inconvenient Truth: The Reality of "Shoddy" CFLs in Developing Asia, and a Plan for Eliminating Them

My Ton, Pacific Northwest National Laboratory
Peter du Pont, Danish Energy Management A/S and Joint Graduate School for Energy & Environment

10 – Visions of the Future: Big New Ideas for Energy Efficiency

Efficiency in a Climate-Constrained World: Are We Aiming High Enough?

Chris Calwell, Ecos Consulting
Laura Moorefield, Ecos Consulting

Making Aggressive Levels of Efficiency "Business as Usual" – California's Strategic Plan for the Next Generation of Energy Efficiency

Jeanne Clinton, California Public Utilities Commission
Cathleen Fogel, California Public Utilities Commission

DOE's Commercial Buildings Program: A Market-Based Approach to Zero Energy Performance

Drury Crawley, U.S. Department of Energy
Paul Torcellini, National Renewable Energy Laboratory
L.J. Sandahl, Pacific Northwest National Laboratory
Sean McDonald, Pacific Northwest National Laboratory
Andrew Nicholls, Pacific Northwest National Laboratory

Extreme Efficiency: How Far Can We Go If We Really Need To?

David B. Goldstein, Natural Resources Defense Council (NRDC)

Getting to Fifty: Moving Toward Low-Energy Commercial Buildings

David Hewitt, New Buildings Institute
Terry Egnor, New Buildings Institute
Mark Frankel, New Buildings Institute

CABA's Intelligent Building Programs

David Katz, Building Intelligence Quotient Consortium
Thomas M. Keel, Georgia Institute of Technology

The Value of Advanced Technologies in the U.S. Buildings Sector in Climate Change Mitigation

Page Kyle, Joint Global Change Research Institute
Leon Clarke, Joint Global Change Research Institute
Steven J. Smith, Joint Global Change Research Institute

Energy Efficiency's Impact on California's Renewable Energy Development

Amber Mahone, Energy and Environmental Economics, Inc.
Jack Moore, Energy and Environmental Economics, Inc.
Jim Williams, Energy and Environmental Economics, Inc.
C.K. Woo, Energy and Environmental Economics, Inc.

Bringing the Vision to Life: Will Advances in Energy Communication Create a Significant Resource Strategy?

Harvey Michaels, Michaels Energy Strategy and Analysis

What Does It Take to Turn Load Growth Negative? A View from the Leading Edge

Scudder Parker, Vermont Energy Investment Corporation

Blair Hamilton, Vermont Energy Investment Corporation

Michael Wickenden, Vermont Energy Efficiency Contract Administrator

Dynamic Energy Management

Kelly E. Parmenter, Global Energy Partners, LLC

Patricia Hurtado, Global Energy Partners, LLC

Greg Wikler, Global Energy Partners, LLC

Clark W. Gellings, Electric Power Research Institute

The Road to Carbon Neutral: ENERGY STAR for Homes and Beyond

Sam Rashkin, U.S. Environmental Protection Agency

Glenn Chinery, U.S. Environmental Protection Agency

David Meisegeier, ICF International

Dean Gamble, ICF International

Scale Matters: An Action Plan for Realizing Sector-Wide “Zero Energy” Performance Goals in Commercial Buildings

Stephen Selkowitz, Lawrence Berkeley National Laboratory

Jessica Granderson, Lawrence Berkeley National Laboratory

Philip Haves, Lawrence Berkeley National Laboratory

Paul Mathew, Lawrence Berkeley National Laboratory

Jeffrey Harris, Alliance to Save Energy

Modeling Approaches to Building Energy Efficiency

William Sisson, United Technologies Corporation and World Business Council for Sustainable Development

EPA Climate Choice: Promoting Emerging Technologies That Protect the Climate

Kristen Taddonio, U.S. Environmental Protection Agency

Peter Banwell, U.S. Environmental Protection Agency

National Cooling Initiative: What Are We Waiting For?

Buck Taylor, Roltay Inc. Energy Services

Mark Cherniack, New Buildings Institute

Deep Energy Reductions in Existing Homes: Strategies for Implementation

Linda Wigington, Affordable Comfort, Inc. (ACI)

11 – Sustainable Communities: Systems Integration at the Community Scale

Smart Mobility: The Cornerstone to Smart Growth

Angela Morin Allen, Alliance to Save Energy

Judith A. Barry, Alliance to Save Energy

Water-Wastewater Program Best Practices: Lessons from the Field

John Bidwell, Quantum Energy Services and Technologies, Inc.

Jennifer Fagan, Itron

Todd Amundsen, Bonneville Power Administration

Sustainable Communities Program: Increasing Savings by Targeting Energy Efficiency and Sustainable Design

Jonathan Budner, Southern California Edison
David Jacot, Southern California Edison
Julia Larkin, KEMA Services, Inc.

Value of Energy Efficiency from Water/Wastewater

Joseph Cantwell, SAIC

Orienting the Neighborhood: A Subdivision Energy Analysis Tool

Craig Christensen, National Renewable Energy Laboratory
Scott Horowitz, National Renewable Energy Laboratory

Green Location: The Critical Role of Land Use in Climate Change and Energy Consumption

Joe DiStefano, Calthorpe Associates

Best Practices in Community Energy-Efficiency and Renewable Energy Partnership Programs

Christopher Dyson, KEMA, Inc.
Jennifer E. Canseco, KEMA, Inc.
Julie Blackwell, Alliant Energy-Interstate Power & Light Company

Quantifying the Third Leg: The Potential for Smart Growth to Reduce Greenhouse Gas Emissions

Amanda Eaken, Natural Resources Defense Council
David B. Goldstein, Natural Resources Defense Council

Sustainable Baltimore ASAP: Assessment Study and Action Plan

Lisa Ferretto, Hord Coplan Macht, Inc.

Government Partnership: Measuring Indirect Impacts on the Community

Luisa Freeman, PA Consulting Group, Inc.
Kevin Cooney, Summit Blue Consulting, LLC
Jean Lamming, California Public Utilities Commission Energy Division
Nick Hall, TecMarket Works
Bryan Ward, PA Consulting Group, Inc.
Floyd Keneipp, Summit Blue Consulting, LLC

Building a Green Capital City: The Natural Step to Madison's Sustainable Design and Energy Future

Sherrie Gruder, University of Wisconsin-Extension

Better than the Sum of their Parts: Taking Advantage of the Water-Energy Nexus to Create Dual-Funded Partnership Programs

Mikhail Haramati, California Public Utilities Commission

Who's Ahead? Climate Cities Benchmark in Japan, U.S. and Germany

Hans Hertle, Institute for Energy and Environmental Research
Katharina Schächtele, Institute for Energy and Environmental Research

Extreme Energy Efficiency on the Path to Climate Stability: A Tale of Two Municipalities

Tina Kaarsberg, U.S. Department of Energy
David Van Holde, King County Washington Government

Life-Cycle Environmental Impacts of the Canadian Residential Sector

Brad Kynoch, Marbek Resource Consultants
Martin Adelaar, Marbek Resource Consultants

Mary Trudeau, Marbek Resource Consultants
John Cuddihy, Marbek Resource Consultants
Meg Ogden, Canada Mortgage and Housing Corporation
Mark Holzman, Canada Mortgage and Housing Corporation
Jamie Meil, Athena Sustainable Materials Institute
Jane Thompson, Jane Thompson Architect

Improving Electricity Services and Reducing Energy Losses for the Urban Poor

John Mollet, International Copper Association
Gycon Garcia Junior, International Copper Association
Jose Cavaretti, AES Eletropaulo
Simone Lawaetz, United States Agency for International Development

Making Fresh AIRE Out of Thin Air: Launching a Local Climate Action Initiative With Minimal State and Utility Involvement

John Morrill, Arlington County, Department of Environmental Services
Joan Kelsch, Arlington County, Department of Environmental Services
William Roper, Arlington County, Department of Environmental Services

Greening Communities: Integrating Climate Protection Policies into Local Governments' General Plans through Online Collaboration

Kif Scheuer, Strategic Energy Innovations
Eun-Soo Lim, Strategic Energy Innovations
Jeffrey Summerville, Strategic Energy Innovations
Cyane Dandridge, Strategic Energy Innovations

Addressing Climate Change Concerns at the Municipal Level: A Case Study of the City of Sunnyvale, California

Betty Seto, KEMA, Inc.

How the "Dirty Dozen" ECMs Created a Need for a Risk Assessment Tool

Keith Willis, Trane USA

A New Community Compact: How One Utility Plans to Meet Increasing Resource and Environmental Challenges

Victoria Zavattero, Sacramento Municipal Utility District
Jim Parks, Sacramento Municipal Utility District
Lois Wright, Sacramento Municipal Utility District