

Sunday Evening, June 1	
5:00 – 8:00	Registration Open
6:00 – 8:00	OPENING RECEPTION and DISPLAY SESSION
Edgewater Ballroom A	Tabletop presentations featuring research results and new technologies will be on display throughout the conference.
Monday Morning, June 2	
7:30 – 8:30	Registration and Continental Breakfast
8:30 – 10:00	WELCOME
Edgewater Ballroom B	Steven Nadel, American Council for an Energy-Efficient Economy Bill Hoover, A.O. Smith, and Lance DeLaura, Sempra Utilities, Industry Co-Chairs Director Susan Patterson, Sacramento Municipal Utility District
	INTRODUCTION TO WATER HEATING TECHNOLOGIES: THE HARD STUFF
	Moderator: Jim Lutz, Lawrence Berkeley National Laboratory
	Water Heating Historical Highlights Larry Weingarten, Elemental Enterprises
	How Hot Water Is Used Gary Klein, Affiliated International Management, LLC
10:00 – 10:30	Break
10:30 – 12:00	INTRODUCTION TO MARKETS AND PROGRAMS: THE HARDER STUFF
Edgewater Ballroom B	Moderator: Bill Hoover, A.O. Smith
	What Does the Market Look Like? Mike Parker, A.O. Smith
	Multifamily Central Domestic Hot Water Nehemiah Stone, KEMA, Inc.
	Perspectives from an Energy Utility Carlos Ruiz, Southern California Gas
	Perspectives from the Water Utilities Mary Ann Dickinson, Alliance for Water Efficiency
12:00-1:30	LUNCH
Edgewater Ballroom A	KEYNOTE: Impacts of Climate Change on California's Water Resources Peter Gleick, President, Pacific Institute

Monday Afternoon, June 2	
1:30 – 3:00	Session 1. Hardware: Recent Developments and Research
<p>1A Making Hot Water</p> <p>Edgewater Ballroom E</p>	<p>TEST PROCEDURES AND THEIR LIMITATIONS</p> <p>Moderator: Jim Lutz, Lawrence Berkeley National Laboratory</p> <p>Where We Are Now: The Current Test Procedure Frank Stanonik, AHRI</p> <p>Uncertainties in the Test Procedure William Healy, National Institute of Science and Technology</p> <p>Testing Water Heaters with Different Draw Patterns Robert Davis, Pacific Gas & Electric Co.</p> <p>Changing Water Heater Rating Methods: ASHRAE 118.2 Harvey Sachs, American Council for an Energy-Efficient Economy</p> <p>Relative Efficiency of Different Types of Combination Systems Tom Butcher, Brookhaven National Laboratory</p>
<p>1B Getting Hot Water</p> <p>Edgewater Ballroom D</p>	<p>HOT WATER DISTRIBUTION ARCHITECTURES</p> <p>Moderator: Gary Klein, Affiliated International Management, LLC</p> <p>Hot Water Distribution Tests in North Carolina Wyndham Wilkinson, Winston-Salem State University</p> <p>Continuous Recirculation vs. On-Demand Recirculation Gabe Ayala, Enovative Group</p> <p>Electric Heat Trace vs. Recirculation Brian Larkin, Tyco Thermal Controls</p> <p>Test Results of New Design of Heat Traps Larry Acker, ACT Metlund</p>
<p>1C Using Hot Water</p> <p>Edgewater Ballroom C</p>	<p>FIELD STUDIES OF HOT WATER USE</p> <p>Moderator: Dave Kalensky, GTI</p> <p>Natural Resources Canada Hot Water Use Field Study Martin Thomas, National Resources Canada</p> <p>Field Monitoring in a Building America Home Marc Hoeschele, Davis Energy Group</p> <p>Solar Row Monitoring in Boulder, Colorado Jay Burch, National Renewable Energy Laboratory</p> <p>Determining Water and Energy Waste in Residential Hot Water Distribution Systems Peter Biermayer, Lawrence Berkeley National Laboratory</p>
3:00 – 3:30	Break

3:30 – 5:00		Session 2. Programs: Who's Doing What?
<p>2A Making Hot Water</p> <p>Edgewater Ballroom E</p>	<p>ENERGY UTILITY EFFICIENCY PROGRAMS</p> <p>Moderator: Bruce Johnson, National Grid</p> <p>Water Heater Installation: A Marketer's Perspective Derek Buchler, Bay State Gas</p> <p>Overview of Water Heater Incentive Programs by Gas Utilities Kara Rodgers, Consortium for Energy Efficiency</p> <p>Southern California Gas Water Heater Efficiency Program Carlos Ruiz, Southern California Gas</p> <p>Experience with Heat Pump Water Heater Utility Programs Russ Johnson, Johnson Research</p>	
<p>2B Getting Hot Water</p> <p>Edgewater Ballroom D</p>	<p>THE PLUMBING CODE AND THE BUILDING CODE</p> <p>Moderator: Gary Klein, Affiliated International Management, LLC</p> <p>Improved Hot Water Distribution Simulation Models Leo Rainer, Davis Energy Group</p> <p>Lessons Learned from Modelling the Use of Electric Heat Trace Brian Larkin, Tyco Thermal Controls</p> <p>Changes to the California Building Code for 2009 Martha Brook, California Energy Commission</p> <p>IAPMO Green Supplemental Update Pete DeMarco, IAMPO</p>	
<p>2C Using Hot Water</p> <p>Edgewater Ballroom C</p>	<p>WATER UTILITY EFFICIENCY PROGRAMS</p> <p>Moderator: Mary Ann Dickinson, Alliance for Water Efficiency</p> <p>Hot Water Programs in Action Eddie Wilcut, San Antonio Water District</p> <p>Using Rebates to Reduce Home Hot Water Use: A Water Utility's Perspective Charles Bohlig, East Bay Municipal Utility District</p> <p>CUWCC's Smart Rebates Program For Hot Water Incentives Katie Shulte-Joung, California Urban Water Conservation Council</p>	
Monday Evening, June 2		
<p>6:00 – 8:00</p> <p>Edgewater Ballroom A</p>	<p>COCKTAIL RECEPTION</p> <p>Come to network and engage your colleagues in discussions about all things hot water over light refreshments! Tabletop presentations featuring research results and new technologies will be on display throughout the evening.</p>	

Tuesday Morning, June 3	
7:30 – 8:30	Registration and Continental Breakfast
8:30 – 10:00	Session 3. Hardware: What's Possible?
<p>3A Making Hot Water</p> <p>Edgewater Ballroom E</p>	<p>STATUS OF BREAKTHROUGH TECHNOLOGIES</p> <p>Moderator: Dave Kalensky, GTI</p> <p>The Eco-Cute: CO₂ Heat Pump Water Heater in Japan Takehiro Maruyama, Lawrence Berkeley National Laboratory</p> <p>ORNL Experience with Residential Drop-In Heat Pump Water Heaters Richard Murphy, Oak Ridge National Laboratory</p> <p>The Vertex: Field Testing a Condensing Gas Water Heater Charlie Adams, A.O. Smith</p> <p>Development of Advanced Low-Cost Solar Water Heaters Jay Burch, National Renewable Energy Laboratory</p> <p>Improvements to Gas Tankless Water Heaters Doug Kosar, GTI</p>
<p>3B Getting Hot Water</p> <p>Edgewater Ballroom D</p>	<p>PRACTICAL PLUMBING</p> <p>Facilitator: Gary Klein, Affiliated International Management, LLC</p> <p>This session will engage participants in an exercise designed to compare the performance of several hot water distribution systems by mapping different strategies for a “typical” building on the floor of the session room. The session invites proponents of more efficient ways to make, deliver, and use hot water to show how their technology fits into the piping system of this typical building.</p> <p>The goal of the exercise is to facilitate discussion about the most energy-, water- and time-efficient ways to install hot water distribution systems, when it is appropriate to use drain water heat recovery, and when installing multiple water heaters might be called for.</p>
<p>3C Using Hot Water</p> <p>Edgewater Ballroom C</p>	<p>SHOWERHEADS and END-USE EFFICIENCY</p> <p>Moderator: Subid Wagley, Pacific Gas & Electric Co.</p> <p>JHTF Water Efficient Showerheads Sally Remedios, Delta Faucet</p> <p>The Latest on Efficient Showerheads John Koeller, California Urban Water Conservation Council</p> <p>Thermostatic Mixing Valves Pete DeMarco, IAMPO</p>
10:00 – 10:30	Break

10:30 – 12:00	Session 4. Programs: What Needs to Be Done?
<p>4A Making Hot Water</p> <p>Edgewater Ballroom E</p>	<p>GETTING BEYOND 2% MARKET SHARE</p> <p>Moderator: Harvey Sachs, American Council for an Energy-Efficient Economy</p> <p>National Heat Pump Water Heater Demonstration Project Ammi Amarnath, Electric Power Research Institute</p> <p>San Diego Solar Water Heater Pilot Program Andrew McAllister, California Center for Sustainable Energy</p> <p>Scaling Up Pilot Programs: About AB 1470 Nicolas Chaset, California Public Utilities Commission</p> <p>The Role of Electric Tankless Water Heaters David Seitz, Microtherm Inc</p> <p>Market Assessment of Tankless Gas Water Heaters Dave Kalensky, GTI</p>
<p>4B Getting Hot Water</p> <p>Edgewater Ballroom D</p>	<p>MULTIFAMILY BUILDINGS</p> <p>Moderator: Martha Brook, California Energy Commission</p> <p>Multifamily Rebate Program CDHW Controls Evaluation Nehemiah Stone, KEMA</p> <p>Multifamily Central DHW Field Study for Title 24 Implementation Owen Howlett, Heschong-Mahone Group</p> <p>Multifamily Controls Evaluation Jorge Gutierrez and Kevin Woo, Southern California Gas</p>
<p>4C Using Hot Water</p> <p>Edgewater Ballroom C</p>	<p>COMMERCIAL KITCHENS</p> <p>Moderator: Jim Early, Georgia Power Company</p> <p>Utility Experience — Water Heating in Commercial Kitchens John Richardson, Tennessee Valley Authority</p> <p>The Water-Efficient Kitchen Charles Bohlig, East Bay Municipal Utility District</p> <p>Case Studies in Restaurant Water Heating Don Fisher, Fisher-Nickel, Inc.</p>
<p>12:00-1:30</p> <p>Edgewater Ballroom A</p>	<p>LUNCH</p> <p>KEYNOTE: Energy and Water in California and Congestion Pricing of Electricity Art Rosenfeld, Commissioner, California Energy Commission</p>

Tuesday Afternoon, June 3	
1:30 – 3:00	Session 5. Cross-Cutting Topics
<p>5A</p> <p>Edgewater Ballroom E</p>	<p>SPECIFYING EFFICIENT WATER HEATERS</p> <p>Moderator: Kara Rodgers, Consortium for Energy Efficiency</p> <p>ENERGY STAR for Water Heaters Rich Karney, Department of Energy</p> <p>California’s Need for Efficient Water Heaters Martha Brook, California Energy Commission</p> <p>Next Steps for Gas Efficiency Programs Kara Rodgers, Consortium for Energy Efficiency</p>
<p>5B</p> <p>Edgewater Ballroom D</p>	<p>CLEAN AIR REGULATORY ISSUES</p> <p>Moderator: Lance DeLaura, Sempra Utilities</p> <p>National Trends: Impacts of National Energy Bill and Greenhouse Gas Objectives Francisco Donez, Environmental Protection Agency</p> <p>Outcomes of Current South Coast Air Quality Management Plan and Future Plans Wayne Barcikowski, South Coast Air Quality Management District (SCAQMD)</p> <p>State and Local Air Quality Regulations Impacts to Utility Companies and Consumers A.L. Wilson, Wilson Environmental Associates</p>
<p>5C</p> <p>Edgewater Ballroom C</p>	<p>LABELING AND DESIGN GUIDELINES FOR HOT WATER EFFICIENCY</p> <p>Moderator: Jim Lutz, Lawrence Berkeley National Laboratory</p> <p>Water Sense, Draft Water-Efficient Single-Family New Home Specification John Flowers, Environmental Protection Agency</p> <p>GreenPoint Rated Jennifer Love, Build It Green</p> <p>LEED for Homes Pepper Smith, Davis Energy Group</p> <p>Smart from the Start New Homes Program John Koeller, California Urban Water Conservation Council</p>
3:00 – 3:30	Break
<p>3:30 – 5:00</p> <p>Edgewater Ballroom B</p>	<p>STRUCTURED GROUP DISCUSSION and CLOSING</p> <p>Moderator: Jim Lutz, Lawrence Berkeley National Laboratory</p> <p>For the last session, we will break into small groups, and discuss the implications of what we've learned at the forum and where hot water systems are going. Groups will be asked to discuss and record on flip charts ideas about the following questions: “What type of hot water systems would we like to see in 20 years?” “What steps are necessary to make those hot water systems reality?” and “How should the codes (Title-24, NAECA, UPC, etc) and labels (ENERGY STAR, Water Sense, LEED, GreenPoint Rated, etc) be changed?” Results will be compiled by ACEEE and posted on the Web site following the conference.</p>

Wednesday Morning , June 4

Optional Coordinated Events (No Charge)

Sign Up When You Check In At Registration For These Optional Open House Events. Transportation Not Provided.

City	Organization	Topic	Time
Davis	Davis Energy Group	Low Cost Solar Water Heating Open House	9:30 – 11:00 am
Davis	Davis Energy Group	Training Session: Hot Water Distribution Computer Simulation Model	9:00-10:00 am & 10:15-11:15 am (as needed)
San Ramon	PG&E	Water Heater Test Lab Tour	10:00-11:30 am
San Ramon	PG&E	Food Service Technology Center Tour	11:30-1:00 am

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CONTRIBUTORS



Thank You to Our Steering Committee!

Industry Co-Chairs

Bill Hoover, A.O. Smith
Lance DeLaura, Sempra Utilities

Members

Martha Brook, California Energy Commission
Derek Buchler, Bay State Gas Company
Mary Ann Dickinson, Alliance for Water Efficiency
James Earley, Southern Company
Bruce Johnson, Keyspan
Dave Kalensky, GTI
Rich Karney, U.S. Department of Energy
Gary Klein, Affiliated International Management, LLC
John Koeller, Alliance for Water Efficiency
Subid Wagley, Pacific Gas & Electric Company
Ricardo Munoz, United Technologies Research Center
John Richardson, Tennessee Valley Authority
Frank Stanonik, Air-Conditioning, Heating, Refrigeration Institute
Nehemiah Stone, KEMA, Inc

Conveners

Harvey Sachs, American Council for an Energy-Efficient Economy
Jim Lutz, Lawrence Berkeley National Laboratory