



BEHAVIOR, ENERGY & CLIMATE CHANGE CONFERENCE

A conference focused on understanding the behavior and decision-making of individuals and organizations and using that knowledge to accelerate our transition to an energy-efficient and low-carbon future

convened by



Stanford | Environmental and Energy Policy Analysis Center
Launched by the Precourt Institute for Energy and Stanford Institute for Economic Policy Research

BECC 2019 | November 17 - 20, 2019 | Sacramento, CA

Sunday, November 17

8:30 AM–5 PM

Pre-Conference Workshops (See page 9 for details)

5:30–6:45 PM
Regency F

Young Professionals Reception

Sponsored by



7–9 PM
Regency ABC

Kickoff Program and Dessert Reception

Registration 6–8 PM

Monday, November 18

7–8 AM **Yoga Stretch** (Capital View - 15th floor)

Sponsored by

NAVIGANT

7–8:15 AM **Continental Breakfast and Registration**

8:15–10 AM
Regency ABC

OPENING PLENARY

Keynote: Phil Sharp, Fellow, The Center on Global Energy Policy at Columbia University's School of International and Public Affairs; former President, Resources for the Future

In spite of national leaders' hostility to climate action, major actions are under way, facilitated by the structures of our government, our economy, and our civil society. Since the 2018 election, the prospects for strong federal policy have grown. Democrat political leaders are pressing major new proposals and a few positive voices are emerging among congressional Republicans. Climate concerns will be on the public agenda for several decades given the necessity to slash global emissions and the local and regional need to grapple with the impacts of a warming world. The political and intellectual challenge ahead is to design and adopt strong policies that capitalize on the basic structures of our society without waiting for politics to radically reform the structures of our government or economy.



10–10:30 AM **Morning Break**

10:30 AM–Noon
Concurrent Sessions

Lightning Session: Approaches to Program Design and Evaluation that Deliver Scalable Results

Moderator: Susan Norris, Pacific Gas and Electric Company

- [Building Better Teams: An Overview of Prosocial Behavior for Cooperative Groups and Why It Matters in Our Action Against Climate Change](#) – Julia Fiebig, Ball State University
- [You Can't Build a Great Building on a Weak Foundation: How a Shortage of Skilled Trade-Workers Impacts Your Energy Efficiency Programs' Ability to Scale Up](#) – Andrew Mielcarek, ILLUME Advising
- [Energy-Saving Tweaks: The Sequel—How Long Do They Persist?](#) – Carly Olig, Navigant
- [Breaking the Mold: Collaborating with Implementation Partners to Build Scalable Programs that Reach New Customers](#) – Pam Goertzen, Summerhill
- [Product Design Lessons Learned the Hard Way: Why Don't We Apply Behavior Principles to Ourselves?](#) – Morgan Hood, Vermont Energy Investment Corporation
- [Mining Your Data for Actionable Insights](#) – Sarah Gibson, Verdant Brand Communications (formerly Brand Cool)

Golden State

Monday, November 18

10:30 AM–Noon Concurrent Sessions

Big Sur

Cows, Hobos, and Spots: Unique Approaches to Sustainability**Moderator:** Kurt Borth, University of Alberta

- [How to Measure People's Shower Length without Being a Stalker](#) – Cynthia Frantz, Oberlin College
- [Personal and Contextual Dimensions of Undergraduates' Environmentally Responsible Behavior in Green and Conventional Residence Halls](#) – Erin Hamilton, Texas Tech University
- [Scaling Up Participatory Thermal Sensing Programs across the University of California System](#) – Kiernan Salmon, University of California, Davis
- [Huge Energy and Dollars Savings in University Labs](#) – Gail Lee, University of California, San Francisco

Regency D

Utility Bills and Changing Behavior**Moderator:** Jim Stewart, Cadmus

- [Utility Investment vs. Consumer Loans: Getting to Yes on Energy Efficiency Through Inclusive Financing for All](#) – Max Toth, Clean Energy Works
- [Prepay Electricity Programs: Potential Energy Savings but at What Cost to the Consumer?](#) – Jeannette LeZaks, Slipstream
- [Behavioral Drivers of Prepaid Electric Service](#) – Nat Treadway, DEFG
- [Using Prepayment Plans to Save Energy and Reduce Emissions—An Evaluation of Results in the Midwest](#) – Matthew Wisniewski, Cadmus

Regency E

Telling the Climate Change Story**Moderator:** Elizabeth Bagley, California Academy of Sciences

- [The Time Is Now! Best Practices for Conservation Marketing in Times of Crisis](#) – Ellen Steiner, Opinion Dynamics
- [Change for Climate—Mobilizing One Million Residents Living in Oil Country](#) – Andrea Soler, The City of Edmonton
- [The Power of Minnesota: Using Film for Narrative Storytelling, Community Conversations, and Digital Engagement](#) – Dan Thiede, University of Minnesota
- [Electrification Market](#) – Keith Dennis, National Rural Electric Cooperative Association

Regency F

Consumer Adoption of New Mobility: Incentives, Technology, and Trust**Moderator:** Lina Fedirko, ClimateWorks Foundation

- [Letting Go of the Wheel: The Nature and Role of Consumer Trust in Autonomous Vehicle Adoption Decisions](#) – Nicole Sintov, The Ohio State University
- [Is It Ok to Get in a Car with a Stranger? Risks and Benefits for Ride-Pooling in Shared Automated Vehicles](#) – Angela Sanguinetti, University of California, Davis Consumer Energy Interfaces Lab
- [Austin Brown, Policy Institute for Energy, Environment, and the Economy, University of California, Davis](#)

Carmel

Equity and Inclusion: Strategies for Expanding Energy Efficiency Impacts**Moderator:** Lauren Casentini, Resource Innovations

- [Qualifying the Lived Experience of Energy Poverty in Toronto, Canada](#) – Runa Das, Royal Roads University
- [Designing Resident-Centric Programs: Lessons Learned on Low-Income Program Design and Implementation](#) – Srinidhi Sampath Kumar, California Housing Partnership
- [Toward Standardized Equity Measurement in the Clean Energy Industry](#) – Marti Frank, Efficiency for Everyone

Noon–1:30 PM Lunch

Noon–1:30 PM Fellows Lunch

1:30–3 PM Concurrent Sessions

Golden State

Lightning: Mobility and Electric Vehicles**Moderator:** Jim Sweeney, Environmental and Energy Policy Analysis Center, Stanford University

- [Leading from the Sales Floor: How Hawaii's EV Expert Certification Program Is Driving Change](#) – Lauren Reichelt, Blue Planet Foundation
- [Characteristics of Lower-Income Participants in California's Clean Vehicle Rebate Project](#) – Jennifer Boughton, Center for Sustainable Energy
- [Why and How Utilities Need to Scale Up Their Electric Vehicle Marketing Efforts](#) – Shelby Kuenzli, E Source
- [Addressing EV Range Anxiety by Going Beyond the Meter](#) – James Cater, Eversource Energy
- [It's a DC Fast Charger, Not a Vacuum Cleaner](#) – Christine White, Frontier Energy
- [Tensions and Complementarities in Mass Transit and Ride-Hailing Decisions Through a Survey-Based Randomization](#) – Saika Belal, Lawrence Berkeley National Laboratory
- [Using Location-Based Services Data for Calculating the Greenhouse Gas Emissions of Communities in Minnesota's Metropolitan Region](#) – Mauricio Leon, Metropolitan Council of the Twin Cities
- [Understanding Consumer Misconceptions of Plug-In Electric Vehicles](#) – Raquel Soat, Navigant
- [Electrifying Potential in Uber and Lyft: The Emission Benefits of Electric Vehicles in Ride-Sharing Platforms](#) – Alan Jenn, University of California
- [The Evolution, Usage, and Trip Chain Patterns of Taxis and Resourcing Services—Evidence from 2001, 2009, and 2017 US NHTS Survey](#) – Xiatian Wu, University of Washington

Monday, November 18

1:30–3 PM Concurrent Sessions

Scaling Up Sustainability through Institutional Culture Change**Moderator:** Cindy Frantz, Oberlin College

Carmel

- [Super Size Me: Preparing the Way to Scale Energy Efficient Behavior to a Million Soldiers and Civilians](#) – Eileen Westervelt, US Army Corps of Engineers
- [Identify Organizational Barriers and Opportunities in Clean Energy Technology Adoption for Large Institutions](#) – Liyang Wang, Lawrence Berkeley National Laboratory
- [Expanding the Pie: Targeting Climate Impacts in Government Purchasing](#) – Karen Cook, County of Alameda
- [Making Behavior Change Meaningful, Accessible, and Appealing for a Diverse Campus](#) – Lauren Hennessy, Stanford University

We'd Better Be Ready: Building Resilient Communities**Moderator:** Steve Menges, National Grid

Big Sur

- [Fires, Floods, and Superstorms, Oh My! How Efficiency and Resiliency Are Bridging the Gap to Climate Solutions](#) – Terra Bell, CLEAResult
- [Resiliency and Energy Efficiency: The Dynamic Duo to Increase Measure Uptake?](#) – Jennifer McWilliams, DNV GL
- [Residential Buildings and Resiliency—The Department of Energy's Lessons Learned](#) – Jonathan Cohen, US Department of Energy
- [Climate Change Resiliency in the US Forest Service](#) – Dixie Porter, USDA Forest Service

Science Behind Motivations, Framing, and Targeting**Moderator:** Rob Buchanan, Xcel Energy

Regency F

- [Insights from the Regulated Price Plan Pilot Project in the Province of Ontario](#) – Dave Thomson, BEworks
- [Loss Aversion and Energy Efficiency Escrows](#) – Joel Hicks, George Mason University
- [Exploring the Relationships between Mindfulness and Household Energy Use](#) – Nischal Neupane, University of Massachusetts, Amherst
- [Enabling Residential TOU Customers to Succeed](#) – Moiz Kapadia, Oracle Utilities

Electrification**Moderator:** Smita Gupta, Itron

Regency E

- [Strategic Electrification in the New Energy Economy](#) – Philip Kreycik, Cadmus
- [Berkeley's Building Energy Saving Ordinance – What's Next for Decarbonization?](#) – Ammon Reagan, City of Berkeley
- [Customer Barriers to Residential Building Electrification as a Means to Reduce Greenhouse Gas Emissions](#) – Donna Whitsett, EMI Consulting
- [Using Network Analysis to Facilitate and Measure Behavior Change and Market Scale-Up](#) – Daniel Kaufman, Industrial Economics

This. Is. How. We. Do. It.—Reading and Remedying Behavior in the Real World**Moderator:** Sharyn Barata, Opinion Dynamics

Regency D

- [Utility Marketplace and Partnership: Utilization of Instant Rebate Platform for Incentive Distribution and Customer Engagement](#) – Roshini Das, City of Sacramento
- [Customer Engagement Enhancements through Data](#) – Thomas McAteer, CMC Energy
- [Energy Efficiency and Flexibility: How Behavioral Change Can Be Triggered with Smart Meters: Lessons from Germany](#) – Karin Kugler, Discovery GmbH
- [Empirical Experiments for Smartphone App Energy Conservation Services Targeting Residential Sectors: An Overview of Initial Findings](#) – Toshiya Iwamatsu, Central Research Institute of Electric Power Industry

3–3:30 PM Afternoon Break

3:30–5 PM

Equity: Behavior Change in Low-Income Communities and the Importance of Equity

Regency ABC

[Additional information](#)

This spotlight will look at how increasing procedural equity would help identify what's most important to a community to spur action, how evoking cultural values such as "not wasting" might help shift behavior, and whether it's fair to implement behavior change programs to save energy in low-income communities—especially when owners often control investments in rental properties—rather than using weatherization or other efficiency program measures.

Moderator: Lisa Hu, The Greenlining Institute

- Maria Stamas, Natural Resources Defense Council
- Alana Mathews, Former Public Advisor, California Energy Commission

Transportation: Let's Move that Curve! New Innovative Mobility Options

Regency DEF

[Additional information](#)

How can we press forward with transportation policies and programs to ensure that all communities have access to new, innovative mobility options, and benefit equitably.

Panelists will cover a variety of perspectives including innovative local strategies that are working to overcome barriers to clean transportation access in low-income and disadvantaged communities.

Moderator: Annalisa Schilla, Manager, Climate Action and Research Planning section, California Air Resources Board

- Susan Shaheen, Professor and Co-Director, Transportation Sustainability Research Center, University of California, Berkeley
- Giovanni Circella, Director, 3 Revolutions Future Mobility Program, University of California, Davis, Institute of Transportation Studies
- Jennifer Donlon Wyant, Transportation Planning Manager, City of Sacramento
- Ashley Georgiou, Staff Air Pollution Specialist, California Air Resources Board

Monday, November 18

5:15–6:30 PM
Capital View
15th floorAmerican Forest Foundation Solutions Session—Pre-registration Required ([additional information](#))6:30–8 PM
Regency ABC

Poster Reception

Refreshments sponsored by



Tuesday, November 19

7-8 AM

Yoga Stretch (Capital View - 15th floor)

Sponsored by

NAVIGANT

7:30–8:30 AM

Continental Breakfast and Registration (Regency Foyer)

8:30–10 AM

Concurrent Sessions

Golden State

Lightning: Campuses and Communities

Moderator: Matt Williams, University of Florida

- [Sustainability and Climate Action in Organizations and Communities – Using Online Tools and Community Organizing to Scale and Inspire Action](#) – Lisa Altieri, Community Climate Solutions
- [Developing Common Metrics – Moving Multiple Organizations to Action](#) – Jon-Paul D'Aversa, MORPC
- [Scaling Up Community Based Social Marketing Research with Student Research Teams](#) – Bridget Flynn, Oberlin College
- [Climate Change Needs Behavior Change: Seven Key Behaviors to Reduce US Household Emissions](#) – Katie Williamson, RARE
- [Energize! A Climate Protection Scale Residential Energy Efficiency Competition](#) – Hal Nelson, Res-Intel
- [Data-Driven Change: Designing Your Energy Lifestyle \(DYEL\)](#) – Kira Smiley, Stanford University

Big Sur

Measuring Non-Energy Impacts

Moderator: Ellen Steiner, Opinion Dynamics

- [DSM Task 24 and CEE: Learnings from an International Behavior Change Collaboration](#) – Sea Rotmann, Sustainable Energy Advice (SEA)
- [Findings from a Benefit-Cost Analysis of Residential Asthma Interventions Using Medicaid Data](#) – Brendan Brown, Green and Healthy Homes Initiative
- [Triple Bottom Line \(TBL\): Getting Beyond “Handwaving” on the Social Bits for Recycling and Energy: Real World Examples](#) – Dana D'Souza, Skumatz Economic Research Associates

Regency D

You Down With IOT? Yeah, It Knows Me! – Making Connected Devices about People (In a Good Way)

Moderator: Omar Siddiqui, EPRI

- [Smart for All: Smart Thermostats in Lower Income Multifamily](#) – Ben Adams, MaGrann Associates
- [Insights on Enhancing Engagement with Real-Time Energy Feedback and Expanding Energy Savings](#) – Mallika Jayaraman, Navigant
- [Made in the Shade: Advocating for Automation of Shading in Existing Buildings](#) – Cathy Higgins, New Buildings Institute
- [A Rising Tide Lifts All Ships: Results and Insights from Novel Behavior-Based Smart Home Efficiency Programs](#) – Daniel Fredman, Vermont Energy Investment Corporation

Regency E

Social and Cultural Contexts

Moderator: Chandra Osborn, Lirio

- [Can We Move Beyond the Status Quo? Communicating Climate Change Adaptation in Coastal Communities](#) – Krysta Sutton, Dalhousie University
- [Recessions or Polarization: How Economic Downturns and Partisanship Influence Climate Change Skepticism in the US](#) – Abhishek Sambatur, DePauw University
- [Energy Conservation Through Awareness Raising? The Evolution of the Japanese Cool Biz Campaign](#) – Robert Lindner, Kyushu University

Carmel

Scalable Solutions for Small and Medium Businesses

Moderator: Anna Ebers Broughel, Tetra Tech

- [The Energy Needs and Wants of Small and Medium Business Customers](#) – Nathan Shannon, Smart Energy Consumer Collaborative
- [A Scalable Solution for SMB Behavioral Energy Efficiency](#) – Lea Lupkin, ICF
- [Scaling Up to Better Engage and Serve a Full Customer Market](#) – Mike Maroney, TRC Solutions

Regency F

Charging Into the Future

Moderator: Gil Tal, University of California, Davis

- [What Vehicles Are Electric Vehicles Replacing?](#) – Brett Williams, Center for Sustainable Energy
- [The Electric Vehicle Charger Installation Process: Insights from Service Providers and Site Hosts](#) – Amy Lastuka, Center for Sustainable Energy
- [An Inferential Study of the Potential Consumer Value of Free Charging](#) – Michael Maness, University of South Florida
- [Facilitating Electric Vehicle Adoption with Energy Cost Calculators](#) – Eli Alston-Stepnitz, University of California, Davis

10–10:30 AM

Morning Break

Tuesday, November 19

10:30 AM–Noon Concurrent Sessions

Lightning: Electrification and Renewables**Moderator: Maria Vargas, US Department of Energy**

Golden State

- [Visualizing Floating Wind Farms and the Scale of a Whale](#) – Sara Gultinan, Bureau of Ocean Energy Management
- [Catching the Wave: Lessons Learned from a Heat Pump Water Heater Pilot Program](#) – Martin Bond, Community Energy Services Corporation
- [Plugging into an Electric Future](#) – Gomathi Sadhasivan, DNV GL
- [Beneficial Load Growth through Electrification: Making BE Part of the DSM Portfolio](#) – Bob Dibella, ICF
- [Mass Customized Solar Permitting and Interconnection Reform: The Results of Discrete Choice Experiments](#) – Margaret Taylor, Lawrence Berkeley National Laboratory
- [The Seduction of Induction](#) – Susan Corbelli, Sacramento Municipal Utility District
- [“Urban Energy Commons.” Shared Renewable Generator Sizing and Electricity Consumption Behavior Change](#) – Craig Burton, University of Melbourne
- [Soft Costs Knowledge Pathways in the US Solar Photovoltaic Ecosystem](#) – Erik Funkhouser, University of Texas at Austin
- [Advancing Smart Home Intelligence to Enable Integration of Residential Distributed Energy Resources](#) – Chun Zhu, Center for Sustainable Energy

The Power of Partnerships: Collaborations for Sustainability**Moderator: Kate Peters, Eversource Energy**

Regency F

- [The Odd Couple: The Surprising Success of BC’s Utility and Local Government Partnerships](#) – Robyn Wark, BC Hydro
- [Let’s Link Up: Water-Energy Nexus Programs](#) – Melody Seesangrit, Irvine Ranch Water District, and Jack Solis with Southern California Edison
- [Leveraging the Brand: Partnering with ENERGY STAR® Increases Customer Satisfaction](#) – Wesley Schultz, California State University
- [Developing A Cleveland Metro Region Environmental Dashboard: A Partnership Between Oberlin College and the Great Lakes Science Center to Scale-Up Behavior Change and Community-Based STEM Education](#) – John Petersen, Oberlin College

Engaging with New Technologies**Moderator: Michael Frischmann, EcoMetrics**

Regency E

- [Understanding Current and Employing Future Practices for Monitoring Building Energy Systems](#) – Frederick Paige, Virginia Tech
- [Market Transformation Using Technical Outreach: Lessons Learned from CHP, Energy Storage, and Commercial Tenant Efficiency in New York](#) – Gita Subramony, ERS
- [The Solar Technical Assistance Team \(Stat\) Experience: Lessons in Designing, Executing, and Evaluating an Energy-Sector Technical Assistance Program](#) – Juliana Williams, National Renewable Energy Laboratory

Innovations in Social and Institutional Signals for Sustainable Behavior and Policy**Moderator: Liz Kelley, ILLUME Advising**

Regency D

- [Fostering Social Change through Dynamic Norms: Encouraging Counter-Normative Sustainable Behaviors](#) – Gregg Sparkman, Stanford University
- [Using Neuroscience to Predict Consumer Social Media Engagement and Energy-Efficient Purchases](#) – Nik Sawe, Stanford University
- [Social Norms and Political Leader Influence on Climate Policy Support](#) – Jennifer Cole, University of Colorado Boulder
- [Utilizing University Resources to Build the Capacity of Local Organizations: A Case Study from the University of Florida](#) – Fiona Hogan, University of Florida

Life Circumstances and Travel Behavior – Equity to Families**Moderator: Lauren Cheatham, Schidler College of Business, University of Hawai’i at Mānoa**

Carmel

- [Family Structure and the Impact of Home Delivery on Household Shopping Trips](#) – C. Anna Spurlock, Lawrence Berkeley National Laboratory
- [Life Course As a Contextual System to Investigate the Effects of Life Events, Gender, and Generation on Travel Mode Usage](#) – Ling Jin, Lawrence Berkeley National Laboratory
- [Issues and Opportunities Integrating TNCs into Transportation Services for Older Adults and People with Disabilities](#) – Jeremy Halpern, University of California, Berkeley
- [New Potential for Paratransit? The Benefits and Limitations of Using E-Hailing Services to Provide ADA Paratransit Rides](#) – Madeleine Parker, University of California, Berkeley

Optimizing Performance with Strategic Energy Management**Moderator: Bruce Cenicerros, ACT**

Big Sur

- [Beyond kWh: The Non-Energy Benefits and Skills at the Heart of a Successful Energy Manager Program](#) – Ari Michelson, ERS
- [Holistic SEM Practices: Power to the People!](#) – Kjell Van Zoen and David Hall, Energy 350
- [A Journey to the Dark: The Saga of Energy Management from the Inside Out](#) – Wendy Gibson, CLEARresult

Noon–1 PM

Lunch

Tuesday, November 19

1–2:30 PM

Concurrent Sessions

Golden State

Lightning: Equity and Resilience

Moderator: Kathy Kuntz, Kanndo Consulting

- [A Method for Analyzing Air Quality-Related Health Risk Inequality in Southern California and Its Application to Energy Efficiency Projects Across California](#) – Stefani Penn, Industrial Economics
- [Using Energy Affordability Analysis to Drive Participation in Low-Income Programs](#) – Kara Rodgers Marshall, Eversource Energy
- [Shaping the Future of Energy Efficiency for Affordable Housing](#) – Shelley Beaulieu, TRC
- [Evaluating Transition Programs for Low-Carbon Resilience That Engages Communities at Neighbourhood Scale: Do They Work?](#) – Stephen Sheppard, Collaborative for Advanced Landscape Planning
- [Digging Deeper: Avoiding Pitfalls in Measuring the Non-Energy Benefits of a Low-Income Multifamily Retrofit](#) – Nermin Dessouky, University of California, Davis Energy and Efficiency Institute
- [Expanding the Role of Human Behavior in Climate Change Adaptation: Proposed Framework and Practices](#) – Jennifer Carman, University of Michigan
- [Jump-starting Adaptation Projects in Your Organization: A Replicable Half-Day Workshop Model](#) – Sarah Church, County of Alameda

Big Sur

Scaling Up Behavior Programs in Organizations

Moderator: Chris Jones, University of California, Berkeley

- [Using Gamification at Universities and Beyond to Massively Scale Up Sustainability](#) – Ryan Bell, University of California Office of the President
- [Gamification and Behavior Change Strategies to Fuel Energy Conservation and Efficiency](#) – Rachel Stern, Port of San Diego
- [Engaging in a Culture of Sustainability: Exploring a New Role of Organizational Culture in Reducing Carbon Footprints](#) – Nicholas Palaschuk, University of Waterloo

Carmel

Scaling the Benefits of Distributed Energy Resources Sustainably

Moderator: Obadiah Bartholomy, Sacramento Municipal Utility District

- [Addressing Integration Challenges of High Shares of Solar Photovoltaics with Battery Storage, Electric Vehicles, and Time-Varying Electricity Pricing](#) – Marius Schwarz, ETH Zurich
- [How Opower Uses Data and Research to Design the Ideal DER Customer Experience](#) – Karina van Schaardenburg, Oracle/Opower
- [Energizing Your Savings—Hourly Pricing and the Solar Net Metering Customer](#) – Araceli Martinez, Elevate Energy
- [Reuse and Recycle: Preparing California for a Sustainable Battery-Reliant Energy Future](#) – Bridget Clark, University of California

Regency F

Human-Centric Programs: Design and Measurement

Moderator: Hal Nelson Portland State University

- [Empathy, Ethnography, Engagement: Accelerating Change Through Human-Centered Design](#) – Bill LeBlanc, E Source
- [Beyond the RCT: Leveraging Meter-Based Savings Methods to Drive Behavioral Energy Efficiency](#) – Alec Danaher, ICF
- [Going Beyond Customer Experience Improvements: Leveraging Journey Mapping to Deliver Added Evaluation Results](#) – Courtney Henderson, ILLUME Advising
- [Be More than a Fly on the Wall: How to Use Mobile Participant Diaries to Experience Programs with Customers in Real Time](#) – Lisa Obeir, ILLUME Advising

Regency E

Mobility Choices

Moderator: Andy Duvall, National Renewable Energy Laboratory

- [Development of an Integrated Model System of Transport and Residential Energy Consumption](#) – Shivam Sharda, Arizona State University
- [Adding Carbon to the Equation in Online Flight Searches to Promote Lower-Emissions Air Travel](#) – Nina Amenta, University of California, Davis Consumer Energy Interfaces Lab
- [Rethinking Our Streets for Future Mobility](#) – Beth Ferguson, University of California, Davis
- [Effects of On-Demand Ridesourcing on Vehicle Ownership, Travel, Energy, and Environmental Outcomes in the United States](#) – Jacob Ward, Carnegie Mellon University

Regency D

Beyond Climate and Cash – What Really Motivates Energy Efficiency and Renewable Energy Adoption?

Moderator: Arien Korteland, BC Hydro

- [Energy Efficiency: Reducing Emissions and Improving Health in the Midwest](#) – Nick Hromalik, Midwest Energy Efficiency Alliance
- [Multifamily Opportunities and Challenges to Energy, Environmental, and Equity Outcomes](#) – Webly Bowles, New Buildings Institute
- [NEBs/NEIs: What Measures Matter? What Measures Deliver the Most NEBs? Getting Past Program-Wide NEBs to Uncover What Households Value Most](#) – Lisa Skumatz, Skumatz Economic Research Associates
- [Does Self-Interest Attract More Sunlight? A Field Experiment on Solar Adoption](#) – Marten Ovaere, Yale University

2:30–2:45 PM

Break

Tuesday, November 19

2:45–4:15 PM Concurrent Sessions

Lightning: Residential Programs

Moderator: Gene Rodrigues, ICF

Golden State

- [We Are 100: Community Stories to Inspire Action on Climate Change](#) – David Aquino, Blue Planet Foundation
- [Multi-Stakeholder Design of Sustainable Complex Energy—Water Systems Using Real-Time Feedback](#) – Niles Guo, Carnegie Mellon University
- [Gas Savings from HER Programs](#) – Beth Fitzjarrald, E Source
- [Transforming Markets at Scale with Utility Choice Engine Platforms](#) – Anne Arquit Niederberger, Enervee
- [Household Energy Efficiency Adoption Behaviour: Integrating Findings from Choice Experiments into Energy Models](#) – Clemens Rohde, Fraunhofer ISI
- [Is Efficacy the Key for Effective Climate Communication?](#) – Christie Manning, Macalester College
- [Information Is Power: Transforming the Real Estate Market](#) – Samantha Caputo, Northeast Energy Efficiency Partnerships

Big Sur

Cities and Buildings of the Future

Moderator: Laurie ten Hope, California Energy Commission

- [What's in a Name? Megaprojects and the New Language of Efficiency at Scale](#) – Bruce Manclark, CLEAResult
- [Transitioning to Highly Sustainable Office Buildings: The Role and Experience of Occupants and Managers](#) – Manuel Riemer, Wilfrid Laurier University

Regency E

From the Cradle of BECC to a Sulky Teen: How have HERs Grown Up?

Moderator: Annika Todd Blick, Lawrence Berkeley National Laboratory

- [Can High Bill Alerts Help Utility Customers Save Energy? Evidence from a Large Randomized Experiment](#) – Jim Stewart, Cadmus
- [Now and Then: A Decade of Behavioral Approaches in Efficiency Programs](#) – Jennifer Smith, Consortium for Energy Efficiency
- [Visualizing Energy Efficiency Information: Evidence from a Randomized Controlled Intervention](#) – Maya Papineau, Carleton University
- [How BGE Drives an Engaging and Cost-Effective Behavioral-Based Savings Program at Scale](#) – Leigh Jarosinski, Baltimore Gas and Electric Company

Regency D

Engaging for Change in Difficult-to-Reach Communities

Moderator: Ben Cooper, StopWaste

- [Income Eligible Digital User Experience](#) – Kevin Dick, Delta Institute
- [Putting the Brakes on Burning: Using Effective Marketing Techniques to Raise Awareness and Improve Regional Air Quality](#) – Jose Villa, Sensis
- [Behavioral Program: New Ways to Engage with Customers](#) – Maria Liza Legaspi, Southern California Gas Company

Carmel

A Whole New World? New Thinking for Big Problems

Moderator: Nick Lange, ICF

- [Giving Occupants Control of their Thermal Comfort to Enable Deep HVAC Savings](#) – David Lehrer, Center for the Built Environment
- [Seeing the Light: Transforming the Adoption of Triple Pane Windows](#) – Enoch Lenge, Eversource Energy
- [Sustainable Consumer Finance Decisions: A First Look at Behavioral Drivers and Design Options](#) – Erin Sherman, Ideas42
- [Advanced Nuclear Technology and the American Public](#) – Kenton De Kirby, The Breakthrough Institute

Regency F

Expanding Access to Carbon Reduction Solutions in Low-Income Communities

Moderator: Pat Aloise-Young, Colorado State University

- [Next-Level Sustainability: Affordable Housing's Role in an Equitable Clean Energy Future](#) – Rebecca Schaaf, Stewards of Affordable Housing for the Future
- [An Open Market Opportunity for Savvy Companies](#), Rick Umoff, SEIA
- [Unlocking the Solar Market: Expanding Access to Low- and Moderate-Income Communities](#) – Elaine Ulrich, US Department of Energy
- [Heat Pumps: Scaling Electrification of Multifamily Buildings](#) – Shah Ruchi, Tenderloin Neighborhood Development Corporation

4:15–4:30 PM Break

Tuesday, November 19

4:30–6 PM

Media: Leveraging Cinema and Storytelling for Impact

Regency ABC

[Additional information](#)

"Now more than ever we need to talk to each other, to listen to each other and understand how we see the world, and cinema is the best medium for doing this." — Martin Scorsese

Hear from three people who have seen success telling stories to engage people on environmental issues. Learn how you can start telling and sharing better stories with storytellers to enhance the impact of your programs.

Moderator: Beth Karlin, See Change Institute

- Levi Hildebrand—Youtuber, Filmmaker
- Simone Friedman—EJF Philanthropies
- Nirvan Mullick—Director, Interconnected.is

At Scale: Leadership and Behavior Change in Organizations

Regency DEF

[Additional information](#)

In this lively, thought-provoking, and empowering session, seasoned BECC luminaries will share their insights on how organizations change and how individuals lead. With experience as leaders within universities, utilities, corporations, government, and non-profits, the speakers will engage in a fast-paced, interactive discussion that is guaranteed to be fascinating.

Moderator: Jim Sweeney, Environmental and Energy Policy Analysis Center, Stanford University

- Fahmida Ahmed Bangert—Director of Sustainability and Business Services, Stanford University
- Gene Rodrigues—Vice President of Market Development, ICF International; formerly with Southern California Edison Company
- Maria Tikoff Vargas—Senior Program Advisor and Director of the Better Buildings Initiative, EERE, US Department of Energy; formerly with Energy Star, US EPA

6:15–7:15 PM
Regency ABC**BFF (otherwise known as the BECC Film Festival)**

Emceed by the Marvelous Bryan Cohen

Sponsored by



Lights! Camera! Behavior Change! The BFF is what critics have called, "the most entertaining hour of the entire conference." You'll laugh, you'll cry, you'll have a drink. Then you'll relax and enjoy some of the best content relating to climate change and energy efficiency, ever.

Wednesday, November 20

7-8 AM

Yoga Stretch (Capital View - 15th floor)

Sponsored by

NAVIGANT

7:30–8:30 AM

Continental Breakfast and Registration (Regency Foyer)

8:30–10 AM

Concurrent Sessions

Golden State

Lightning: Fun, Funds, Fractals, and Feedback: Innovative Research on Motivating and Assessing Energy Behavior Change

Moderator: Derek Okada, Southern California Edison

- [How Do We Affect the Behavior Needed to Study Behavior? Or: Getting the Best Response Rate to Surveys Is Still More Complicated Than You Think](#) – Ryan Bliss, ADM Associates
- [Competition, Collaboration, Transformation! The BOMA Quebec Energy Challenge](#) – Genevieve Gauthier, Econoler
- [Fractals: Reshape Energy Efficiency Programs for Business Customers by Putting Building Operators at the Center](#) – Kady Cowan, Independent Electricity System Operator
- [Motivating—and Monetizing—Behavior Changes through the Carbon IRA Framework](#) – Jason Makansi, Pearl Street

Regency E

Renewables for All

Moderator: Darrin Kayser, Edelman

- [Equal Access to Sunshine: Barriers and Opportunities for PV in Disadvantaged Communities](#) – Tabitha Harrison, AEA
- [Are We Approaching Equity in the US Residential Solar Market? Income and Demographic Trends of Residential Solar Adopters](#) – Naim Darghouth, Lawrence Berkeley National Laboratory
- [Distributed Solar and Environmental Justice: Exploring the Demographic and Socioeconomic Trends of Residential PV Adoption in California](#) – Boris Lukanov, Physicians, Scientists and Engineers for Healthy Energy
- [Energy Justice and Equity in Solar Development: How Solstice Is Developing and Piloting an Alternative Credit Metric to Qualify Community-Shared Solar Customers](#) – Lauren Levine, Solstice Initiative

Regency F

The Interface of Technology and Behavior

Moderator: John Tideman, MyHEAT

- [Lessons Learned from a Smart Home Demonstration in New York City](#) – Bethany Sparr, National Renewable Energy Laboratory
- [How Is Behavior Influenced Through Energy Feedback Messaging?](#) – Wendell Grinton, Virginia Tech
- [Bill Alerts: A Tool to Reduce Energy or Empower Customers](#) – Yifan Lu, Sacramento Municipal Utility District

Carmel

How's It Gonna Be? – Insight into Handling an Uncertain Future

Moderator: Susan Wilhelm, California Energy Commission

- [What-If Modeling to See Energy Futures Under Climate Change: The Case of Air-Conditioning](#) – Mithra Moezzi, Portland State University
- [Scaling Up Requires A Paradigm Shift for Data Access](#) – Robert King, Good Company Associates
- [Market Intelligence? Eliciting Expert Opinions from Non-Expert Stakeholders](#) – Sarah Outcault, University of California, Davis Energy and Efficiency Institute

Wednesday, November 20

8:30–10 AM Concurrent Sessions

Big Sur

International Perspectives on Electric Vehicle Markets**Moderator:** Scott Hardman, University of California, Davis

- [Effectiveness of China's Plug-in Electric Vehicle Subsidy](#) – Rubal Dua, KAPSARC
- [Touchpoints for E-Mobility: Vehicle Purchase Process Understanding for a More Efficient Promotion of Electric Vehicles](#) – Jana Plananska, University of St.Gallen
- [Plug-In Electric Vehicle Customer Preferences](#) – Jamie Dunckley, Electric Power Research Institute
- [The Characteristics of Commitment: A Comparison of Interest and Intention in Electric Vehicle Adoption](#) – Karen Ehrhardt-Martinez, Navigant

Regency D

Scaling Up the Marketing and Evaluation of Behavior Change Programs

The bar for program evaluation has been high for decades, particularly for programs that include behavioral approaches. Yet advances in big data and behavioral theory have enabled us to think about the marketing and evaluation of programs in new and exciting ways. Come hear from four EE scholars and practitioners working at the edge of this paradigm shift so that we can scale up the impact of our programs—together!

Moderator: Beth Karlin, See Change Institute**Panelists:**

- Kira Ashby, Consortium for Energy Efficiency
- Hale Forster, Columbia University and See Change Institute
- Ethan Goldman, Recurve
- Nick Lange, ICF Emerging Strategies

10–10:30 AM Morning Break

10:30 AM–Noon

Regency ABC

CLOSING PLENARY**Youth Activism**

"I don't want you to be hopeful...I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is."

— Greta Thunberg, World Economic Forum, Jan 2019

Youth activists have focused the world's attention on the climate crisis. On Friday, September 20th, the Global Climate Strike organized over 4 million people in nearly 6,000 locations in 185 countries around the world. This is not just their moment; it is the start of a new era of youth-led climate action. What motivates youth to action? What do youth see and feel that adults do not? How can emerging youth organizations and more established energy, behavior climate change (BECC) organizations support each other? The BECC 2019 closing plenary will feature youth leaders from organizations around North America via video conference and local activists in-person. Join the conversation in this youth-led session on how to massively scale up climate action globally.

Panelists:**High School Students:**

- Amber Crenna-Armstrong, CoolDavis.org
- Anna Grace Hottinger, Minnesota Can't Wait
- Victoria Hsieh, Sunrise Movement and US Youth Climate Strike
- Ellinor Arzbaeher, 350Sacramento.org

University Students:

- Sage Lenier, University of California, Berkeley, Zero Waste: Solutions for a Sustainable Future
- Elsa Mengistu, Howard University, Zero Hour

1–4:30 PM

Post-Conference Workshops (See next page for details)

Pre- and Post-Conference Workshops

Sunday, November 17

- | | |
|------------------------------|--|
| 1pm – 4:30pm
Golden State | Visual Storytelling: Putting Data into Context
Arlene Birt, Minneapolis College of Art and Design |
| 8:30am – 4:30pm
Carmel A | Behavioral Program Success: 10 Pitfalls to Avoid and Best Practices to Scale Up
Julie Colehour, C+C and Hal Nelson, Res-Intel |
| 8:30am – 4:30pm
Carmel B | Behavior Change 101
Nick Lange, ICF, Dr. Beth Karlin and Dr. Sea Rottman, See Change Institute |

Wednesday, November 20

- | | |
|---------------------------|--|
| 1pm – 4pm
Golden State | Expanding and Scaling Up Behavioral Science Research on Climate Change
Tony Biglan, Oregon Research Institute, Tiffany Dubuc, the Chicago School of Professional Psychology, and Julia Fiebig, ABA Global Initiatives |
| 1pm – 4pm
Carmel AB | Cool Tools for Scaling Up Collective Climate Action through Neighbourhoods and Schools
Stephen Sheppard and Kanchi Dave, Collaborative for Advanced Landscape Planning, University of British Columbia |
| 1pm – 4:30pm
Ventura | Creating Effective Organizational Change: A Five-Step Framework
Christopher Payne, Lawrence Berkeley National Laboratory |

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