

## Tuesday, October 8

**M** = MAGNOLIA **G** = GARDENIA **T** = TOFANELLI **C** = CARR

### 8:00 AM • BREAKFAST

### 9:00 AM • WELCOME

#### **M** Opening Remarks

Welcome by **Jose Bodipo-Memba**, Chief Diversity Officer, Sacramento Municipal Utility District.

### 9:15 AM • OPENING PANEL

#### **M** How to Accelerate Decarbonization in California, with AHRI, CARB, CEC, and DOE

Learn from leaders at the AHRI, CARB, CEC, and DOE how their organizations closely coordinate policy design and program design around market realities by setting aggressive goals.

*Moderated by **Brian Stonerock**, Director, Advanced Energy Solutions, Southern California Edison*

- **Samantha Slater**, Senior Vice President, Government Affairs, Air-Conditioning, Heating, and Refrigeration Institute
- **Rajinder Sahota**, Deputy Executive Officer, Climate Change and Research, California Air Resources Board
- **J. Andrew McAllister, PhD**, Commissioner, California Energy Commission
- **Ram Narayanamurthy**, Deputy Director, Building Technologies Office, Office of Energy Efficiency & Renewable Energy, US Department of Energy

### 10:15 AM • BREAK

### 10:45 AM • BREAKOUT SESSIONS 1

#### **M** A Balancing Act: The Precision and Power of Smart Control Tech

Learn about studies on customer behaviors, load management capabilities, and the effectiveness of emissions reduction messaging to address the challenges of integrating smart control technologies.

*Moderated by **Mark Martinez**, Senior Portfolio Manager, Southern California Edison*

- **Albert Chiu**, Expert Product Manager, Pacific Gas and Electric Company
- **Jeff Barnes**, Emerging Technologies Project Manager, San Diego Gas & Electric

#### **G** Avoiding Panel Upsizing: Who Needs an Upgrade, Really?

Join our panel discussion to explore pathways to electrification, including who needs an upgrade, and discover tools that support Californians in this journey.

*Moderated by **Emma Tome**, Air Pollution Specialist, Building Decarbonization and Innovative Strategies, California Air Resources Board*

- **Jenny Low**, Senior Program Manager, Build It Green
- **Eric Daniel Fournier, PhD**, Research Director, California Center for Sustainable Communities, Institute of the Environment and Sustainability, University of California, Los Angeles
- **Michael Mutmansky**, Associate Director, TRC (CalNEXT)

#### **T** Gas Heat Pumps

Be there as we explore GAHP applications that could offer significant short-term natural gas and emissions savings and provide a bridge for customers who don't initially electrify.

*Moderated by **Merry Sweeney**, Project Manager II, Emerging Technologies, San Diego Gas & Electric*

- **Cristalle Mauleon, PE**, Engineering Manager, Lincus Inc. (GET)
- **Madeline Talebi**, Energy Engineer, ICF (GET)
- **Saurabh Shekhar**, Energy Engineer, ICF (GET)

#### **C** Low-GWP Refrigerants: New Equipment vs. Retrofits

Learn about the challenges of meeting GWP refrigerant requirements, through 2030 and after, and what solutions are available for helping customers satisfy this criteria for new equipment.

*Moderated by **Paul Delaney**, Facilitator, ETCC*

- **Ron Domitrovic, PhD**, Program Manager, Customer Technologies, EPRI
- **Doug Davenport**, CEO, ProspectSV
- **Sean Jarvie**, Chief Technology Officer, Flow Environmental Systems

### 11:45 AM • LUNCH

### 12:45 PM • BREAKOUT SESSIONS 2

#### **M** Modeling and Modulating: Innovative Solutions Enabling Residential/Commercial Customer Flexibility

Explore the potential of smart home technology to enable customers to optimize their energy use and savings through messaging, analytics, and end-device integration.

*Moderated by **Ivy So**, Program Manager, APTIM*

- **Marco Pritoni**, Research Scientist, Lawrence Berkeley National Laboratory
- **Albert Chiu**, Expert Product Manager, Pacific Gas and Electric Company
- **Jeff Barnes**, Emerging Technologies Project Manager, San Diego Gas & Electric

#### **G** Solutions for Optimizing Electrical Panel Usage and Avoiding Unnecessary Panel Upsizing

Take a deep dive into panels as distinguished researchers discuss solutions that can provide a pathway to electrification without upsizing existing electrical panels.

*Moderated by **Yu Hou**, Supervisor, California Energy Commission*

- **Rebecca Rothman**, Manager, Consulting, VEIC (CalNEXT)
- **Xin Jin**, Group Manager, Grid Edge and Advanced Controls, National Renewable Energy Laboratory
- **Spencer Harrison**, CEO/Co-Founder, NeoCharge

#### **T** Dual-Fuel/Hybrid Systems for Residential Heating

Join us as we analyze the potential for dual-fuel heating systems to reduce natural gas use and emissions while offering Californians a lower-cost option to full electrification.

Moderated by **Eric Kirchoff**, Manager, Clean EE Strategies, SoCalGas

- **Saurabh Shekhdar**, Energy Engineer, ICF (GET)
- **Cristalle Mauleon, PE**, Engineering Manager, Lincus Inc. (GET)
- **Jared Landsman**, Senior Managing Consultant, E3

## **C** Low-GWP Refrigerants: Positive Transitions for Decarbonization

Get an overview of the refrigerant policies driving the transition to low and ultra-low GWP refrigerants, the safety considerations of adopting emerging A2L and A3 refrigerants, and more.

Moderated by **Danielle Wright**, Executive Director, North American Sustainable Refrigeration Council

- **Aanchal Kohli**, Manager, F-gas Reduction Strategy Section, California Air Resources Board
- **Brad Hoover**, Principal Consultant, DNV Energy Insights USA

**1:45 PM • BREAK**

**2:15 PM • BREAKOUT SESSIONS 3**

## **M** The Future of Flexibility: An Interactive Discussion

Join us as we envision the next decade of demand response, informed by trends in machine learning, Internet of Things devices, automated demand response systems, and more.

Moderated by **Josh Rasin**, Manager, Technology Acceleration, Sacramento Municipal Utility District

- **Jingjing Liu**, Program Manager, Lawrence Berkeley National Laboratory
- **Stefanie Wayland**, Load Flexibility Lead, California Energy Commission
- **Albert Chiu**, Expert Product Manager, Pacific Gas and Electric Company
- **Jeff Barnes**, Emerging Technologies Project Manager, San Diego Gas & Electric
- **Mark Martinez**, Senior Portfolio Manager, Southern California Edison

## **G** Overcoming Challenges to Scaling Building Decarbonization

This session will outline the challenges of meeting California's goals to significantly reduce fossil fuel usage in homes and businesses, including installing 6 million heat pumps by 2030.

Moderated by **Will Vicent**, Deputy Director, Building Standards, California Energy Commission

- **Sandy Laube**, Fellow, Energy Efficiency, Energy Solutions (CalNEXT)
- **Scott Higa**, Senior Project Manager, Codes and Standards, Southern California Edison

## **T** Multifamily Gas Applications Research

Learn options for reducing emissions and costs for multifamily residences as we dive into topics related to GAHPs and the sizing of hot water systems in the multifamily sector.

Moderated by **Saurabh Shekhdar**, Energy Engineer, ICF (GET)

- **Madeline Talebi**, Energy Engineer, ICF (GET)
- **Cristalle Mauleon, PE**, Engineering Manager, Lincus Inc. (GET)

## **C** Technician Training to Unlock Efficiency for Ultra-Low GWP Refrigerants

Listen in as experts preparing the refrigeration technician workforce for the transition to low and ultra-low GWP refrigerants discuss handling and safety procedures for post-2030 refrigerants.

Moderated and co-presented by **Danielle Wright**, Executive Director, North American Sustainable Refrigeration Council

- **Mary E. Koban**, Agile Manager, The Chemours Company
- **Chris Compton**, President, HVACRedu.net LLC

**3:15 PM • BREAK**

**3:30 PM • BREAKOUT SESSIONS 4**

## **M** What's Load Got to Do with It? The Rise of Flexible Heat Pump Technology

Join us for a discussion on pioneering demand-responsive heat pump technology that can balance energy efficiency, grid stability, and customer comfort and convenience.

Moderated by **Kelly Cunningham**, Codes and Standards, Pacific Gas and Electric Company

- **Caton Mande**, Senior R&D Engineer, Western Cooling Efficiency Center, UC Davis
- **Edwin Hornquist**, Principal Technical Leader, EPRI
- **Ammi Amarnath**, Principal Technical Executive, EPRI

## **G** Solutions to Equitably Fulfill the Workforce Needs for Our Decarbonized Future

Join WET program managers with SoCalREN, SMUD, and SCE as they share ongoing efforts to encourage the next generation to prepare for high-paying, technically skilled jobs.

Moderated by **Axel Pearson**, Project Manager, Pacific Northwest National Laboratory

- **Juan Argueta**, Senior Manager, Customer Engagement Division, Southern California Edison
- **Jacobe Caditz**, Manager, Community Education and Regional Workforce Development, Sacramento Municipal Utility District
- **Lujana Medina**, Environmental Initiatives Division Manager, Southern California Regional Energy Network, County of Los Angeles

## **T** Other (Natural Gas) Research

Catch up on the latest research on lowering emissions, including three areas that seek to address the reduction of emissions for natural gas burning equipment.

Moderated by **Saurabh Shekhdar**, Energy Engineer, ICF (GET)

- **Anoushka Cholakath**, Energy Engineer, ICF (GET)
- **Jaeson Cardiff**, CEO and Cofounder, CleanO2 Carbon Capture Technologies
- **Hardik Shah**, Manager, Technical Programs, GTI Energy

## **C** Role of Refrigerants in the Electrification of Commercial HVAC

Investigate design technology considerations for applications such as campuses, data centers, and general commercial-building comfort as panelists discuss installations from Europe and progress in the United States.

Moderated by **Abhilasha Wadhwa**, Senior Analyst, Building Decarbonization and Renewable Gas Section, Energy Division, California Public Utilities Commission

- **Philip Johnston**, Vice President, Environmental Business Development Center, Daikin Applied Americas
- **Morgan Copeland**, Regional Sales Manager, Heat Pumps, Oilon US Inc.
- **Ron Domitrovic, PhD**, Program Manager, Customer Technologies, EPRI

## Wednesday, October 9

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8:00 AM • BREAKFAST

9:00 AM • PLENARY

### M What's Needed in the Next 5 Years, with PG&E, SCE, SMUD, and SoCalGas

Day 2 begins with a thought-provoking opening panel with the California utilities on the decarb milestones they each hope to achieve over the next five years.

Moderated by **Carol Yin**, Facilitator, ETCC

- **Michael Delaney**, Vice President, Utility Partnerships & Innovation, Pacific Gas and Electric Company
- **Eric Seilo**, Principal Manager, Customer Programs Integration and Development, Southern California Edison
- **James Frasher**, Director, Research & Development, Grants and Partnerships, Sacramento Municipal Utility District
- **Don Widjaja**, Vice President, Customer Services Field and Solutions, SoCalGas

10:15 AM • BREAK

10:45 AM • BREAKOUT SESSIONS 1

### M Successful Technology Transfer through CalNEXT

CalNEXT will discuss successful tech transfer into California's Energy Efficiency Program Portfolio. Learn how its collaborative process provides actionable recommendations to energy efficiency program designers.

Moderated by **Savannah McLaughlin**, Energy Efficiency Regulatory Analyst, California Public Utilities Commission

- **Greg Barker**, Technical Director, Energy Solutions (CalNEXT)
- **Kyle Booth**, Associate Director, Engineering, Energy Solutions (CalNEXT)
- **Rebecca Rothman**, Manager, Consulting, VEIC (CalNEXT)

### G Removing Barriers to Heat Pump Water Heaters in Foodservice Facilities

In this session, Code Readiness and CalNEXT research teams will present low-carbon solutions that meet the energy demands of commercial kitchens while helping customers decrease emissions.

Moderated by **Martin Vu**, Principal Engineer and Patent Attorney, RMS Energy Consulting, LLC

- **Amin Delagah**, Associate Director, Research & Consulting Group, Advanced Energy Division, TRC (CalNEXT)
- **Maya Gantley**, Senior Consultant, 2050 Partners
- **Mehdi Zeyghami**, Mechanical Engineer, Pacific Gas and Electric Company

### T Hydrogen Overview and the Path Forward

In a double presentation, we will provide an update on the challenges in producing and transporting lower-emissions hydrogen and hydrogen-methane blends safely and efficiently.

Moderated and co-presented by **Eric Kirchoff**, Manager, Clean EE Strategies, SoCalGas

- **Kevin Uy**, Branch Manager, California Energy Commission

### C Charging Ahead: Statewide Efforts to Deploy EV Charging Infrastructure

Learn about LADWP's and CEC's initiatives for making charging available and the challenges and opportunities presented by building out the grid to support this new EV load.

Moderated by **Jaron Weston**, Branch Manager, Zero Emission Vehicle Acceleration, California Energy Commission

- **Greg Sarvas**, Electric Transportation Program Supervisor, Los Angeles Department of Water and Power
- **Lisa Arellanes**, Principal Manager, eMobility, Southern California Edison

11:45 AM • LUNCH

12:45 PM • BREAKOUT SESSIONS 2

### M Prioritizing Technology Opportunities through CalNEXT

CalNEXT has an innovative process for identifying and prioritizing promising technologies. Come learn how CalNEXT develops Technology Priority Maps and uses them to communicate research priorities to the market.

Moderated by **Derek Okada**, Senior Fellow, Energy Solutions (CalNEXT)

- **Greg Barker**, Technical Director, Energy Solutions (CalNEXT)
- **Rebecca Rothman**, Manager, Consulting, VEIC (CalNEXT)

### G Food Service: Providing Technologies and Support for Decarbonization

Hear how decarbonization in food service is being supported, and learn about efforts at local, state, and national levels, through both education and demonstration.

Moderated by **Martin Vu**, Principal Engineer and Patent Attorney, RMS Energy Consulting, LLC

- **Oliver Ta**, Engineer, Foodservice Technology Center, Southern California Edison
- **Kyle Booth**, Associate Director, Engineering, Energy Solutions (CalNEXT)
- **Alison Rhodes**, Senior Technical Assistant, EPRI

### T Natural Gas and Hydrogen Blends for End-Use Equipment

Gain insights into the implications of replacing natural gas as we present research on testing and quantifying the impacts of hydrogen-natural gas blends on commercial end-use equipment.

Moderated by **Steven Long**, Director, Engineering, ICF (GET)

- **Madeline Talebi**, Energy Engineer, ICF (GET)
- **Ryan Kerr**, Director, Emerging Technologies, GTI Energy

### C Leveraging EVs to Manage the Electric Grid

This session examines the potential for EVs to provide new types of control and flexibility for grid operators and explores three utilities' perspectives on vehicle-grid integration.

Moderated by **Jingjing Liu**, Program Manager, Lawrence Berkeley National Laboratory

- **Blake Heidenreich**, Strategic Advisor, Southern California Edison
- **Carol Kay**, Project Manager, Research & Development, Sacramento Municipal Utility District
- **Nick Fiore**, Clean Transportation Innovation Manager, San Diego Gas & Electric

## 1:45 PM • BREAK

## 2:15 PM • BREAKOUT SESSIONS 3

### M Embodied Carbon: Perspectives from Policy, Industry, and Practice

Learn how California became the first state to formally address embodied carbon in its building codes and how regulators, suppliers, and designers can collaborate toward solutions.

Moderated by **Dave Intner**, Senior Advisor, Southern California Edison

- **Irina Brauzman**, Supervising Architect, California Building Standards Commission
- **Karin Perissinotto**, Sustainability Manager, CalPortland
- **Jack Rusk**, Director, Climate Strategy, EHDD

### G Adopting Heat Pump Technologies for Space Heating Purposes

In this session, our experts will share programs supporting and evaluating the use of heat pumps for space conditioning applications and discuss ways to support adoption goals.

Moderated by **Haile Bucaneg**, Senior Mechanical Engineer, California Energy Commission

- **Scott Blunk**, Deputy Director, Existing Buildings, Load Flexibility and Appliance Efficiency, California Energy Commission
- **Adam Cornelius**, Senior Program Manager, Consortium for Energy Efficiency
- **Samuel Petty**, Technology Manager, Commercial Validations, US Department of Energy

### T Natural Gas and Hydrogen Blends for Infrastructure

Join us to explore how the proposed H2 infrastructure is expected to help offset emissions. Efforts supporting infrastructure, including residential and commercial, will be presented.

Moderated by **Steven Long**, Director, Engineering, ICF (GET)

- **Pooya Khodaparast**, Utilities Engineer, California Energy Commission
- **Nico Bouwkamp**, Business Development Manager H2, GTI Energy

### C Part 1: Window Projects: Exploring the Value Proposition for High-Performance Windows

In this session, we will challenge myths, highlight innovations, and foster dialogue among industry leaders to promote information-sharing, technology transfer, and market facilitation.

Moderated and co-presented by **Rick Dunn**, Senior Manager, Emerging Technology, Resource Innovations (CalMTA)

- **Brad Begin**, Chairman, Alpen High Performance Products
- **Robert Hart**, Technology Researcher, Lawrence Berkeley National Laboratory

## 3:15 PM • BREAK

## 3:30 PM • BREAKOUT SESSIONS 4

### M Idea to Initiative: Advancing Market Transformation in California

Get an update on market transformation initiatives for California. You can also interact with two innovative technologies used in the strategy pilots and share feedback with CalMTA.

- **Stacey Hobart**, Principal, Stakeholder Engagement & Communications, Resource Innovations (CalMTA)
- **Rick Dunn**, Senior Manager, Emerging Technology, Resource Innovations (CalMTA)
- **Jeff Mitchell**, Principal, Market Transformation, Resource Innovations (CalMTA)
- **Sam Lamos**, Public Policy Manager, Gradient
- **Weldon Kennedy**, Co-Founder and Chief Marketing Officer, Channing St. Copper Co.

### G Advancing Hot Water Solutions: Field Insights, Installations, and Efficiency Strategies for Heat Pump Water Heaters

Join us for an engaging session that explores how the latest advancements in heat pump water heater technology are answering the call for sustainable solutions.

Moderated by **Alyssa Cheung**, Senior Regulatory Analyst, California Public Utilities Commission

- **Noah Gabriel**, Project Manager, New Buildings Institute
- **Mark Rehley**, Senior Manager, Emerging Technology & Product Management, Northwest Energy Efficiency Alliance
- **Mehdi Zeyghami**, Mechanical Engineer, Pacific Gas and Electric Company

### T Building Resiliency through Robust Flexible Demand and DERs

Explore how integrating flexible demand with diverse DERs through open and secure communication protocols can be a pivotal solution to building resilience while bolstering grid support.

Moderated by **Mark Martinez**, Senior Portfolio Manager, Southern California Edison

- **Charles Kim**, Senior Engineer, Southern California Edison
- **Randall Higa**, Consulting Engineer, Southern California Edison
- **Jeremy Laundergan**, Vice President, Consulting Services, EnerNex

### C Part 2: Building Envelopes, They've Got Everything—Efficiency, Decarbonization, Health, Safety, Climate Resiliency

Discover how building envelope optimization plays a vital role in achieving energy efficiency and carbon reduction goals and paves the way for heat pumps and other systems.

Moderated by **Payam Bozorgchami**, Senior Civil Engineer, California Energy Commission

- **Curtis Harrington**, Engineering Manager, Western Cooling Efficiency Center, UC Davis
- **Chad Gretzner**, Research Engineer, Kliewer and Associates
- **Ron Kliewer**, Senior Building Scientist, Kliewer and Associates

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# SCHEDULE AT A GLANCE

## Tuesday, October 8

MAGNOLIA	GARDENIA	TOFANELLI	CARR
<b>8:00am Breakfast</b>			
<b>9:00AM Welcome and Opening Panel</b>			
How to Accelerate Decarbonization in California, with AHRI, CARB, CEC, and DOE			
<b>10:15am Break</b>			
<b>10:45am Breakout Sessions 1</b>			
A Balancing Act: The Precision and Power of Smart Control Tech	Avoiding Panel Upsizing: Who Needs an Upgrade, Really?	Gas Heat Pumps	Low-GWP Refrigerants: New Equipment vs. Retrofits
<b>11:45am Lunch</b>			
<b>12:45pm Breakout Sessions 2</b>			
Modeling and Modulating: Innovative Solutions Enabling Residential/ Commercial Customer Flexibility	Solutions for Optimizing Electrical Panel Usage and Avoiding Unnecessary Panel Upsizing	Dual-Fuel/Hybrid Systems for Residential Heating	Low-GWP Refrigerants: Positive Transitions for Decarbonization
<b>1:45pm Break</b>			
<b>2:15pm Breakout Sessions 3</b>			
The Future of Flexibility: An Interactive Discussion	Overcoming Challenges to Scaling Building Decarbonization	Multifamily Gas Applications Research	Technician Training to Unlock Efficiency for Ultra-Low GWP Refrigerants
<b>3:15pm Break</b>			
<b>3:30pm Breakout Sessions 4</b>			
What's Load Got to Do with It? The Rise of Flexible Heat Pump Technology	Solutions to Equitably Fulfill the Workforce Needs for Our Decarbonized Future	Other (Natural Gas) Research	Role of Refrigerants in the Electrification of Commercial HVAC



# SCHEDULE AT A GLANCE

## Wednesday, October 9

MAGNOLIA	GARDENIA	TOFANELLI	CARR
<b>8:00am Breakfast</b>			
<b>9:00am Plenary</b>			
What's Needed in the Next 5 Years, with PG&E, SCE, SMUD, and SoCalGas			
<b>10:15am Break</b>			
<b>10:45am Breakout Sessions 1</b>			
Successful Technology Transfer through CalNEXT	Removing Barriers to Heat Pump Water Heaters in Foodservice Facilities	Hydrogen Overview and the Path Forward	Charging Ahead: Statewide Efforts to Deploy EV Charging Infrastructure
<b>11:45am Lunch</b>			
<b>12:45pm Breakout Sessions 2</b>			
Prioritizing Technology Opportunities through CalNEXT	Food Service: Providing Technologies and Support for Decarbonization	Natural Gas and Hydrogen Blends for End-Use Equipment	Leveraging EVs to Manage the Electric Grid
<b>1:45pm Break</b>			
<b>2:15pm Breakout Sessions 3</b>			
Embodied Carbon: Perspectives from Policy, Industry, and Practice	Adopting Heat Pump Technologies for Space Heating Purposes	Natural Gas and Hydrogen Blends for Infrastructure	Part 1: Window Projects: Exploring the Value Proposition for High-Performance Windows
<b>3:15pm Break</b>			
<b>3:30pm Breakout Sessions 4</b>			
Idea to Initiative: Advancing Market Transformation in California	Advancing Hot Water Solutions: Field Insights, Installations, and Efficiency Strategies for Heat Pump Water Heaters	Building Resiliency through Robust Flexible Demand and DERs	Part 2: Building Envelopes, They've Got Everything—Efficiency, Decarbonization, Health, Safety, Climate Resiliency