



**The 2023 Summer Study on Energy Efficiency in Industry**  
**“Decarbonization – Turning Goals into Achievable Action Plans”**

**PROGRAM**

**MGM Grand Hotel • Detroit, MI**  
**July 11 – 13, 2023**

Welcome to ACEEE's 15<sup>th</sup> biennial Summer Study on Energy Efficiency in Industry, "Decarbonization – Turning Goals into Achievable Action Plans." During the conference, we will explore how to capitalize on recent progress of decarbonizing the industrial sector. What do U.S. climate goals and recent federal policy developments mean for individual companies? What strategies and technologies can companies implement to support decarbonization goals, and how can companies determine which strategies and technologies are best for them? What changes are happening at the state and regional levels? How can industry and policymakers help train and support the workforce of the future in this sector?

Immerse yourself over three days in workshops, sessions, Plenaries, and networking time. The conference will kick off with side events such as the SEM Summit and Industrial Heat Pumps (IHP) Workshop on Tuesday, July 11. Continue Wednesday and Thursday with four Panel session options (Panel 1: Energy Efficiency, Panel 2: Energy Resources, Panel 3: Material Efficiency, Panel 4: Workforce Development); Plenary sessions featuring key leaders in the industrial space; afternoon Action Sessions, and plenty of networking time during the Welcome reception sponsored by our host [DTE](#), Inclusivity in Industry mixer, as well as a Women in Energy Efficiency Breakfast. There is something for everyone at this event!

## PLANNING COMMITTEE

### CO-CHAIRS:

Alberta Carpenter, National Renewable Energy Laboratory  
Steve Schultz, International Energy Consultants LLC

### PANEL LEADERS:

#### **Panel 1: Energy Efficiency**

Peter Bassett, Energy Performance Services  
Haresh Malkani, CESMII

#### **Panel 2: Energy Resources**

Ammi Amarnath, EPRI  
John Seryak, Go Sustainable Energy

#### **Panel 3: Material Efficiency**

Nabil Nasr, REMADE Consortium/RTI  
Yetunde Omolayo, Dow  
Andre Yvon-Bessett, Dow

#### **Panel 4: Workforce Development**

Kristen Cetin, Michigan State University IAC  
Sarah Crane, University of Michigan

### ACEEE STAFF:

Conferences: Amelia Armstrong, Rebecca Lunetta, Lynn Pyle

Program: Neal Elliott, Jonah Eisen, Nora Efram, Andrew Hoffmeister, Anna Johnson, Steve Nadel, Pavitra Srinivasan

Communications: Camron Assadi, Mary Robert Carter, Kate Doughty, Rob Kerns, Nick Roper, Ben Somberg

Development: Corinne Abbott, Alan Raymond

# PROGRAM

**Tuesday, July 11**

10:00 am – 5:00 pm	<b>Add on: Industrial Heat Pump (IHP) Workshop (\$75)</b> The IHP Workshop’s focus will include demonstrations, market transformation initiatives, and available funding to accelerate domestic manufacturing of IHP, market technical support, and plant implementation. The workshop will also include a presentation on the global IHP experience from international experts.	Salon 3
11:00 am – 5:00 pm	<b>Add on: SEM Summit (\$175)</b> The SEM Summit is designed to enhance SEM and decarb knowledge by addressing regional challenges while working alongside others in the SEM community. Attendees will leave with tangible and useful tools and concepts.	Salon 1
3:00 – 7:00 pm	<b>Registration opens</b>	Grand Ballroom Foyer
5:00 – 7:00 pm	<b>Welcome Reception</b> Join us to officially kick-off the Summer Study at the Welcome Reception, sponsored by the conference host <b>DTE</b> . Network, re-connect with friends, socialize, and even work on your golf swing in this immersive setting.	Top Golf Swing Suite

Tuesday, July 11

## Wednesday, July 12

7:00 am – 5:00 pm	<b>Registration</b>	Grand Ballroom Foyer
8:00 am – 9:00 am	<b>Breakfast and Women in EE Breakfast</b> <i>(starts at 7:30 am)</i> <i>(Breakfasts set up as buffet in Foyer)</i>  Moderator(s): Alberta Carpenter and Elizabeth Doris, National Renewable Energy Laboratory  “ <b>Women in Energy Efficiency Leadership Badges</b> ” Speaker: Penni McLean-Conner, Executive Vice President of Customer Experience and Energy Strategy, Eversource	Salons 3 & 4 Amber Room
9:00 – 10:00 am	<b>Perspectives from Industry Plenary Panel Session</b> Introduction: Steve Nadel, Executive Director, ACEEE  Welcome: John Boladian, Director of Energy Efficiency, DTE Energy  Moderator: Dan Brown, CEO, Board Member, Cascade Energy  Speaker(s): Patrick Bloom, VP Government Relations, Cleveland Cliffs Johnathan Holladay, VP Government Programs, Lanza Tech Lucas Moreno Kristiansen, VP Growth and New Business, Argos USA	Salons 1 & 2
10:00 – 10:30 am	<b>Networking Break</b>	Grand Ballroom Foyer
10:30 am – 12:00 pm	<b>Concurrent Panel Sessions 1</b>  <b>Panel 1, Session 1</b> <b>Federal, State, and Utility Policies and Tools for Industrial Decarbonization</b>  Moderator: Peter Bassett, Energy Performance Services  <i>Energy Use and Carbon Emissions in U.S. Manufacturing: Analysis of Energy Supply, End Use, Loss, and Greenhouse Gas Emissions</i> Caroline Dollinger, Energetics  <i>Subnational Policies for Industrial Decarbonization: How States and Utilities Can Play a Key Role</i> Andrew Hoffmeister, ACEEE  <i>50001 Ready: A Proven Platform for Decarbonization</i> <i>(no paper)</i> William Miller, Lawrence Berkeley National Laboratory	Amber Room

**Panel 2, Session 1**  
**Industrial Electrification/Decarbonization  
Using Heat Pumps**

Garnet Room

Moderator: Ammi Amarnath, EPRI

*A Market Transformation Strategy for Industrial  
Heat Pumps: An Opportunity to Reduce Industrial  
Greenhouse Gas Emissions by ~20%*

Steve Nadel, ACEEE

*Do Heat Pumps Work for Process Heat? Yes  
and Maybe!*

Melissa Stewart, VEIC

*Commercial and Industrial Decarbonization  
through Waste Heat Recovery*

Baskar Vairamohan, EPRI

**Panel 3, Session 1**

Sapphire Room

**Materials Efficiency and Decarbonization  
of the Industrial Sector**

Moderator: Andre Yvon Bessette, Dow

*This will be a panel discussion with industry  
representatives.*

Narayan Ramesh, Dow

Joe Cresko, U.S. Department of Energy

Kevin Anderson, Brunswick

**Panel 4, Session 1**

Salon 1

**Approaches to Energy Workforce Training  
Programs**

Moderator: Kristen Cetin, Michigan State University

*Preparing the Next Generation of Strategic  
Energy Managers (no paper)*

Rory Schmick, Lawrence Berkeley National Laboratory

*Reskilling and Upskilling for the Energy Industry:  
The Role of Micro-credential Programs for  
Workforce Development*

Aparajita Datta, University of Houston

*US DOE Better Plants Program's Approach to  
Manufacturing Workforce Development*

Wei Guo, Oak Ridge National Laboratory

12:00 – 1:30 pm

**Scholar & Awards Recognition Lunch**

Salons 3 & 4

Wednesday, July 12

1:30 – 3:00 pm

## Concurrent Panel Sessions 2

### **Panel 1, Session 2** **Industrial Decarbonization Technologies**

Amber Room

Moderator: Neal Elliott, ACEEE

*Industrial Technology Validation - Evaluation*

*Results from Electrochemical Based Water*

*Treatment Demonstration Projects (no paper)*

Shankar Earni, Lawrence Berkeley National Laboratory

*Assessment of Combined Heat and Power Systems in the  
Midwest's Top Manufacturing Industries*

Joe Ricchiuto, MEEA

*Decarbonization through Industrial Process*

*Efficiency (no paper)*

Michael Stowe, Advanced Energy

### **Panel 2, Session 2** **Low Carbon Resources 1**

Garnet Room

Moderator: Ammi Amarnath, EPRI

*CO2 Emission Savings from Manufacturing Sector Load  
Shaping (no paper)*

Kelly Kissock, UC Davis Energy and Efficiency Institute

*Right Onsite: Accelerating Deployment of Onsite  
Clean Energy Technology in the Industrial Sector*

Kyle Niemeyer, US Department of Energy

*OPEN DISCUSSION: Industrial Load Flexibility*

Ammi Amarnath, EPRI

### **Panel 3, Session 2** **Standards Impacting Decarbonization of the Industrial Sector**

Sapphire Room

Moderator: Yetunde Omolayo, Dow

*Approaches to Net Zero Carbon in Industry:*

*ISO/PAS 50010*

David B. Goldstein, Natural Resources Defense Council

*Protocols, Rates, Factors, Attribution, Accounting*

*Oh My! A Survey of U.S. Emission Accounting Resources  
and What Stakeholders Should Know*

Nathan Phillips, DNV

*Analysis Methods for Better Green Energy Technologies (no paper)*

Samantha Reese, National Renewable Energy Laboratory

Wednesday, July 12

**Panel 4, Session 2**  
**DEI Integration into Energy Workforce Development**

Moderator: Sarah Crane, University of Michigan

*Best Practices for Developing a Diverse and Equitable Workforce*

Deidra Miniard, Walker-Miller Energy Services

*Workforce Development: What's Culture Change Got to Do with It?*

Kora Dreffs, DNV

*Building the Workforce for an Inclusive Energy Transition*

Jennifer Kuklenski, Minnesota Power

3:00 – 3:30 pm

**Networking Break**

Grand Ballroom Foyer

3:30 – 5:00 pm

**ACTION SESSION**  
**Strategies for Decarbonizing Industry: An Interactive Discussion & Debate**

Salon 1

The U.S. Department of Energy (DOE) released its *Industrial Decarbonization Roadmap* in September 2022, laying the foundation for a U.S. path to net-zero industrial emissions by 2050—while underscoring the challenge and complexity of the needed solutions. This Action Session will include lively discussion and debate about the specific technology strategies needed to translate industrial decarbonization goals into meaningful emissions reductions. Which approaches are likely to be the most impactful, which will require the most R&D investment, and which are the most actionable today? Join this interactive session to hear perspectives from an expert panel and fellow Summer Study participants!

Moderator: Joe Cresko, U.S. Department of Energy

Co-Organizers: Alberta Carpenter, National Renewable Energy Laboratory; Heather Liddell, Energetics; Caroline Dollinger, Energetics

Panelists: Tom Wenning, Oak Ridge National Laboratory; Perry Stephens, EPRI; Daniel Cooper, University of Michigan; and Andrew Peterman, Rivian

5:00 – 6:00 pm

**INCLUSIVITY IN INDUSTRY MIXER**

Amber Room

This informal gathering will bring together members of underrepresented communities in the industry sector for an evening of networking and great conversation. All are welcome to join us in a supportive space to foster collaboration and professional relationships.

## Thursday, July 13

7:00 am – 5:00 pm	<b>Registration</b>	Grand Ballroom Foyer
8:00 am – 9:00 pm	<b>Breakfast</b>	Salons 3 & 4
9:00 – 10:00 am	<b>Government and Utility Sector Policies Plenary Session</b>  Moderators: Co-Chairs Alberta Carpenter, National Renewable Energy Laboratory and Steve Schultz, International Energy Consultants  Panelists: Dr. Zack Valdez, Chief of Staff, Office of Manufacturing and Energy Supply Chains, U.S. Department of Energy Todd Amundson, Industrial Engineer Technical Lead, Energy Efficiency, Bonneville Power Administration	Salons 1 & 2
10:00 – 10:30 am	<b>Networking Break</b>	Grand Ballroom Foyer
10:30 am – 12:00 pm	<b>Concurrent Panel Sessions 1</b>  <b>Panel 1, Session 1</b> <b>Industrial Energy Management and Decarbonization – Making It Happen</b>  Moderator: Peter Bassett, Energy Performance Services  <i>Stellantis Optimizes Non-productive Energy through “Excellent Plant Shutdown” Initiative</i> Lisa Lawee, Energy Performance Services, Inc. and Kim Baslock, Stellantis  <i>Decarbonization of the Detroit Diesel Corporation with ISO 50001, SEP 50001 and Electrification</i> Paul Scheihing, PHI Environmental Consulting	Amber Room
	<b>Panel 2, Session 1</b> <b>System Impacts from Industrial Electrification</b>  Moderator: John Seryak, Go Sustainable Energy  <i>Subsector- and State-level Analysis of Industrial Electrification in the U.S.</i> Cecilia Springer, Global Efficiency Intelligence  <i>Non-Wires Alternatives Meet Energy Efficiency</i> Brooke Smallwood, Oasis Energy Partners  <i>Existing and Emerging Energy Storage Technologies at Scale: Market, Environment, and Economics (no paper)</i> Samantha Reese, National Renewable Energy Laboratory	Garnet Room



Sapphire Room

**Panel 3, Session 1**

**Science-based Methodologies to Accelerate Decarbonization**

Moderator: Yetunde Omolayo, Dow

*Decarbonization the Industrial Sector through LCAs (no paper)*

Christopher Uraire, Energy Solutions

*Hotspot Detection for Industrial Decarbonization Opportunities Using Environmentally Extended Input-Output (EEIO) Modeling (no paper)*

Samuel Gause, Energetics

*Realizing the Non-energy Benefits of Energy Efficiency in Industrial Firms; Successful Application*

Catherine Cooremans, University of Lausanne

**Panel 4, Session 1**

**The Future of Energy Workforce Development: Innovations and New Ideas**

Moderator: Sarah Crane, University of Michigan

*Workforce Development Needs to Support a Successful Implementation of IRA*

Anna Johnson, ACEEE

*Innovations to Navigate Challenges in Energy Workforce Development*

Jenny Oorbeck, Fresh Coast

Salon 1

12:00 – 1:30 pm

**Lunch**

Salons 3 & 4

1:30 – 3:00 pm

**Concurrent Panel Sessions 2**

**Panel 1, Session 2**

**Manufacturing Roundtable**

Moderator: Steve Schultz, International Energy Consultants

*Energy Management System Peer-to-peer Roundtable for Manufacturers*

This roundtable is for manufacturers to learn from their peers who are interested in building thriving energy management system business practices. Led by 50001 Ready experts from the manufacturing sector participants will discuss strategies to gain top management buy-in, best practices, and how energy management systems can help achieve decarbonization goals. Join us for valuable discussions and meaningful networking opportunities.

Panelists:

Kim Baslock, CEM, Stellantis; Paul Scheihing, PHI Consulting, and Greg Lamson, Boston Scientific

Amber Room

Thursday, July 13

**Panel 2, Session 2**  
**Low Carbon Resources 2**

Garnet Room

Moderator: John Seryak, Go Sustainable Energy

*Electrification as a Decarbonization Option for Thermal Applications in the SME Sector in India*

Shirish Bhardwaj, Alliance for and Energy Efficient Economy

*Decarbonizing California's Industry with Hydrogen: Preliminary Assessment (no paper)*

Paul Glanville, GTI

*Uncovering the True Value of Solar: A Story of Ratemaking, Transmission Peak Pricing, and Misaligned Price Signals (no paper)*

Ryan Schuessler, Go Sustainable Energy

**Panel 3, Session 2**

Sapphire Room

**The Role of Construction Materials in a Low-Carbon Economy**

Moderator: Nabil Nasr, REMADE Consortium /RTI

*Low-carbon Fuel Pathway to Decarbonize Hard to Electrify Industries. Case Study: Cement and Glass Industries*

Perry Stephens, EPRI

*Novel Insulating Construction Blocks of Agricultural Waste for High Energy Performance and Carbon Capture Buildings*

Alex Cicelsky, GTI Energy

*Adoption of Limestone Calcined Clays in the US Cement Market in the Drive to Net Zero*

Pavitra Srinivasan, ACEEE

**Panel 4, Session 2**

Salon 1

**Energy Workforce Roadmaps and Case Studies**

Moderator: Kristen Cetin, Michigan State University IAC

*ENERGY STAR's Comprehensive Heat Pump Water Heater Workforce Training Roadmap*

Paul Campbell, ICF & Nate Jutras, EPA

*Decarbonizing Manufacturing Plants with a Trained Workforce*

Jason Strano, Eversource

3:00 – 3:30 pm

**Networking Break**

Grand Ballroom Foyer

Thursday, July 13

3:30 – 5:00 pm

Salon 1

**ACTION SESSION**

**Opportunities for Federal Programs to Support Industrial Decarbonization**

The past several years has seen congress provide DOE and other federal agencies unprecedented levels of funding for industrial energy efficiency and decarbonization. Only a small portion of these funds have been programmed with more emerging in the coming months and years. Staff leads from DOE and other agencies will discuss current and future industrial program opportunities and be available to answer questions in an interactive session.

Moderator: Neal Elliott, ACEEE

Co-organizers: Anne Hampson and Clifton Yim, U.S. Department of Energy

U.S. Department of Energy Panelists:

Dr. Avi Schultz, Industrial Efficiency and Decarbonization Office

Dr. Zack Valdez, Office of Manufacturing and Energy Supply Chains

Christina Walrond, Office of Clean Energy Demonstrations

5:00 pm

**Conference Ends**

Thanks for joining us!