



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 15th 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	Add on: Industrial Heat Pump (IHP) Workshop (\$75) 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 1
11:00 am – 5:00 pm	Add on: SEM Summit (\$175) 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 3
3:00 – 7:00 pm	Registration opens	Grand Ballroom Foyer
5:00 – 7:00 pm	Welcome Reception Join us to officially kick-off the Summer Study at the Welcome Reception, sponsored by the conference host DTE . Network, re-connect with friends, socialize, and even work on your golf swing in this immersive setting.	Topgolf Swing Suite

Tuesday, July 11

Wednesday, July 12

7:00 am – 5:00 pm	Registration	Grand Ballroom Foyer
8:00 am – 9:00 am	Breakfast and Women in EE Breakfast <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 “ Women in Energy Efficiency Leadership Badges ” Speaker: Penni McLean-Conner, Executive Vice President of Customer Experience and Energy Strategy, Eversource	Salons 3 & 4 Amber Room
9:00 – 10:00 am	Perspectives from Industry Plenary Panel Session Introduction: Steve Nadel, Executive Director, ACEEE Welcome: John Boladian, Director of Energy Efficiency, DTE Energy Moderator: Dan Brown, CEO, Board Member, Cascade Energy <u>Panelists:</u> 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	Networking Break	Grand Ballroom Foyer
10:30 am – 12:00 pm	Concurrent Panel Sessions 1 Panel 1, Session 1 Federal, State, and Utility Policies and Tools for Industrial Decarbonization Moderator: Peter Bassett, Energy Performance Services <i>Energy Use and Carbon Emissions in U.S.</i> <i>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: Nabil Nasr, REMADE Consortium /RTI

*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

*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

Scholar Program Introduction: Nora Efram, ACEEE

Scholar Appeal: Sharyn Barata, Opinion Dynamics and
Mark Johnson, Clemson University

Scholar recipients recognized.

Award Program Introduction: Steve Nadel, ACEEE

Award recipients recognized.

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: Andre Yvon Bessette, 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

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	Registration	Grand Ballroom Foyer
8:00 am – 9:00 pm	Breakfast	Salons 3 & 4
9:00 – 10:00 am	Government and Utility Sector Policies Plenary Session Moderators: Co-Chairs Alberta Carpenter, National Renewable Energy Laboratory and Steve Schultz, International Energy Consultants <u>Panelists:</u> 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 Stacey Sabo, Senior Project Manager, NYSERDA	Salons 1 & 2
10:00 – 10:30 am	Networking Break	Grand Ballroom Foyer
10:30 am – 12:00 pm	Concurrent Panel Sessions 1 Panel 1, Session 1 Industrial Energy Management and Decarbonization – Making It Happen 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
	Panel 2, Session 1 System Impacts from Industrial Electrification 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

Panel 3, Session 1

Science-based Methodologies to Accelerate Decarbonization

Moderator: Yetunde Omolayo, Dow

Decarbonization the Industrial Sector through LCAs (no paper)

Christopher Uraine, 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

Decarbonizing Manufacturing Plants with a Trained Workforce

Jason Strano, Eversource

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:

Michelle Croal, Ford Motor Company

Greg Lamson, Boston Scientific

Kim Baslock, Stellantis

Afif Bitar, American Axle and Manufacturing

Amber Room

Panel 2, Session 2
Low Carbon Resources 2

Garnet Room

Moderator: John Seryak, Go Sustainable Energy

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

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

Pavitra Srinivasan, ACEEE

3:00 – 3:30 pm

Networking Break

Grand Ballroom Foyer

3:30 – 5:00 pm

ACTION SESSION

Salon 1

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 Yin, 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

Dan Hancu, DOE Office of Fossil Energy and Carbon Management

5:00 pm

Conference Ends

Thanks for joining us!

Thursday, July 13