
# The 2021 Virtual Summer Study on Energy Efficiency in Industry

## "Decarbonizing Industry"

## PROGRAM (Draft)

July 12-15, 2021

# PROGRAM

Welcome to ACEEE's 14th biennial **Summer Study on Energy Efficiency in Industry,** "Decarbonizing Industry." Due to COVID-19, the Summer Study will be a virtual event this year.

The following pages contain information about the Summer Study program. It is currently in the draft stage since speakers and sessions may shift; plenary speakers are still being invited; and networking sessions are still being coordinated. Please check back periodically for updates.

Links to all sessions will be sent to registered attendees closer to the event. Please keep in mind, the Summer Study schedule is based on **Eastern time** hours.

## Monday, July 12

**2:15-3:15 PM** **PLENARY #1**
[Speaker(s) tbd]

**3:15-4:45 PM** **Welcome Reception** (Zoom)
[More information to come]

## Tuesday, July 13

**11:00 AM-12:00 PM** **PLENARY #2**
[Speaker(s) tbd]

**12:00-12:45 PM** **Linda Latham Scholar Recognition** (Zoom)
[More information to come]

**12:45-1:15 PM** **BREAK**

# Tuesday, July 13 continued

**1:15-2:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 1, Session 1: How Agile Manufacturing is Helping Small and Medium Manufacturers become Resilient**

- Enabling Small and Medium Manufacturers to Adopt Smart Manufacturing — *Joy Pixley, UC Irvine*
- Energy Management and Product Sustainability Standards: A Key Link to Sustainable Supply Chains — *Vestal Tutterow, Lawrence Berkeley National Laboratory*
- 3rd Party M&V is Treasure Meant to be Shared — *Peter Kleinhenz, Go Sustainable Energy*

**Panel 2, Session 1: Examples/Stories**

- The Non-Energy Benefits of Industrial Technologies — *Ikram Laaguidi, EPRI*
- From Diesel to Electric: How Energy Efficiency and Electric Utilities can Partner to Electrify Rural Manufacturing Options —*Jonathan Thibeault, VEIC*
- Emerging Technology Concepts to Fully Decarbonize Ironmaking — *Christina Chang, U.S. Department of Energy*

**Panel 3, Session 1: Decarbonization Pathways Using Different Approaches around the World**

- Reducing Rocky Mountain Emissions — *Genevieve London, Stillwater Energy*
- Decarbonizing Industry through the Adoption of Strategic Energy Management — *Lisa Sparks, CLEAResult*
- Impacts of Regulatory, Managerial, and Technological Factors on Energy Efficiency: A Novel Study in the Vietnamese Industries — *Luan Nguyen, Griffith University*

**2:45-3:15 PM** **BREAK**

# Tuesday, July 13 continued

**3:15-4:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 4, Session 1: State and Regional Programs/Policy**

- Industrial Energy Policy: How Foreign Companies in the Midwest Pursue Energy Efficiency Irrespective of Exemptions and Opt-Out Policies — *Nicholas Moshage, Midwest Energy Efficiency Alliance*
- Building Efficiency Codes as a Vehicle for Deep Energy and Carbon Reductions in the Industrial Sector — *Jonathan McHugh, McHugh Energy*
- State Policies for Achieving Aggressive 2020-2030 Industrial Decarbonization Targets — *Kelly Kissock, UC Davis*

**Panel 1, Session 2: Technology and Business Hurdles in Achieving Agile Manufacturing**

- How Manufacturers are Finding New Energy Savings by Engaging On-Site Teams through Crowdsourcing and Gamification — *Clifton Yin, ICF*
- Monetizing Energy Resilience — *Allison Ross, VEIC*
- Citizen Technology Hubs: The Future of American Self-Sufficient Manufacturing Supply Chains — *Soundar Kumara, Penn State*

**Transformative Interactive Session #1 (Zoom): TBD**

**4:45-5:15 PM** **BREAK**

**5:15-6:30 PM** **NETWORKING RECEPTION and POST PANEL DEBRIEF**

- **Panel 1 Breakout (Zoom)**
  [Description TBD]
- **Panel 2 Breakout (Zoom)**
  [Description TBD]
- **Panel 3 Breakout (Zoom)**
  [Description TBD]
- **Panel 4 Breakout (Zoom)**
  [Description TBD]

# Wednesday, July 14

**11:00 AM-12:00 PM** **PLENARY #3**

[Speaker(s) tbd]

**12:00-12:45 PM** **Champions of Energy Efficiency Awards Recognition** (Zoom)

**12:45-1:15 PM** **BREAK**

**1:15-2:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 2, Session 2: Analysis**

- Systems- and Technology-Level Analysis of Electrification Potential in 13 U.S. Manufacturing Subsectors — *Ali Hasanbeigi, Global Efficiency Intelligence*
- One of These Things IS Like the Other: A New Taxonomy of Industry for Improved Energy System Modeling — *Elizabeth Wachs, National Renewable Energy Laboratory*
- Carbon Management Requires Energy Management — *Peter Therkelsen, Lawrence Berkeley National Laboratory*

**Panel 3, Session 2: Technologies and Equipment Choices to Reduce GHG Emissions**

- How Chill is Carbon? Evaluating Industrial Process Cooling Options — *Daniel Jordan, VEIC*
- Energy-Efficient Compressed Air Sequencing Using Non-Linear and Evolutionary Optimizers — *Abinesh Selvacanabady, Sage Energy Consulting*
- Not Just Hot Air: Low-Cost Decarbonization through Heat Recovery — *Joel Zahlan, Cadmus*

**Panel 4, Session 2: Out of the Box or Innovative Policies and Programs aka "Big Challenges & Big Solutions"**

- The Next New Economics is Circular — *Woodrow Clark, Clark Communications Strategic Partners*
- Low Carbon Steel Production Transition through the Lens of the Oil and Gas Industry — *Caitlin Swalec, Global Energy Monitor*
- Decarbonizing India's Building Construction: Design Optimization and Policy Implementation — *Aafsha Kansal, AEEE*

# Wednesday, July 14 continued

**2:45-3:15 PM** **BREAK**

**3:15-4:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 1, Session 3: How Agile Manufacturing Helps Achieve Sustainability**

- Fiat Chrysler A Drives Operational Savings During COVID — *Peter Bassett, Energy Performance Services*
- Three California Industries under the Energy Efficiency Microscope — *Christopher Dyson, DNV GL*
- Turn It Off: Decarbonizing Your Manufacturing Operation with a Push of a Button — *Taka Kokabu, VEIC*

**Panel 2, Session 3: Alternate Fuels**

- Determining the Ideal Mix: (Finding Out) What Range of Measures are Best for One's Business? — *Stefan Buettner, Institute for Energy Efficiency in Production*
- Pathways and Challenges to Adoption of Decarbonized Hydrogen in Industrial Processes — *William Goetzler, Guidehouse*
- Beneficial CHP: Is That a Thing? Considering CHP in the Context of Beneficial Electrification — *Bruce Hedman, Entropy Research*

**Transformative Interactive Session #2 (Zoom): TBD**

**4:45-5:15 PM** **BREAK**

**5:15-6:30 PM** **NETWORKING RECEPTION AND POST PANEL DEBRIEF**

- **Panel 1 Breakout (Zoom)**
  [Description TBD]
- **Panel 2 Breakout (Zoom)**
  [Description TBD]
- **Panel 3 Breakout (Zoom)**
  [Description TBD]
- **Panel 4 Breakout (Zoom)**
  [Description TBD]

# Thursday, July 15

**11:00 AM-12:00 PM** **PLENARY #4**

[Speaker(s) tbd]

**12:00-12:45 PM** **Transformative Interactive Session #3** (Zoom)

**12:45-1:15 PM** **BREAK**

**1:15-2:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 3, Session 3: Relying on Resource Efficiency to Build Decarbonization Pathways**

- The Impact of Strategic Energy Management Practices on Energy Efficiency: Statistical Evidence from Plant-Level Data — *Gale Boyd, Duke University*
- Analytical Tools to Achieve Deep Decarbonization Pathways for Industries — *Amit Kanungo, DNV GL*
- Holistic Evaluation of Decarbonization Pathways of Energy-intensive Industries Based on Exergy Analysis — *Matthias Leisin, Stuttgart University*

**Panel 4, Session 3: Innovative Industry Case Studies**

- Bringing Innovation into the Mainstream: Overcoming Challenges in Funding Unique Projects through Regular Program Offerings — *Jon Feldman, IESO*
- Reducing Energy Use and GHG Emissions in California's Food Processing Sector through Innovative Program Design — *Kevin Uy, California Energy Commission*
- A Transmission Critical Peak Pricing Pilot for Manufacturers in Ohio — *John Seryak, Go Sustainable Energy*

**Panel 1, Session 4: Using Sustainability Strategies to Create Business Value**

- Pursuing Perpetual Project Performance Persistence: Lessons from the Field — *Jennifer Wood, Bonneville Power Administration*
- SEM at Scale: OMG, My Cohort has 142 Facilities! - *Zach Podell-Eberhardt, Cascade Energy*
- *The Facility Performance Index (FPI) — Phillip Thomas, A1 Solutions*

# Thursday, July 15 continued

**2:45-3:15 PM** **BREAK**

**3:15-4:45 PM** **CONCURRENT PANEL SESSIONS**

**Panel 2, Session 4: Technology Development**

- Industrial Heat Pumps: Electrifying Industry's Process Heat Supply — *Ed Rightor, ACEEE*
- Manufacturing an Extremely Efficient Transistor for Decarbonization — *Tina Kaarsberg, U.S. Department of Energy*
- *How Much Focus Should Go Towards Optimizing Inherently Inefficient Compressed Air Systems vs. Phasing Them Out — Chris Wagner, Go Sustainable Energy*

**Panel 3, Session 4: Innovative Solutions to Climate Complexities**

- Improving Power Resilience and Reliability for Industry: A Novel Decision Framework to Assess Microgrid Resilience Benefits Under Different Physical Climate Risk Scenarios — *Gavin Dillingham, HARC*
- The Future of $H_2$ Logistics is SOLID — *James Khong, Galaxy FCT*
- Third presentation TBD

**Panel 4, Session 4: National/Global Government Policies & Programs**

- Assessment for a Federal Buy Clean Policy for Carbon-Intensive Construction Materials in the United States — *Ali Hasanbeigi, Global Efficiency Intelligence*
- Modernizing the U.S. Building Stock through the Advanced Building Construction Initiative — *Cheryn Metzger, Pacific Northwest National Laboratory*
- Green Public Procurement and Buy Clean Policies and Programs around the World — *Cecelia Springer, Boston University*
- The Potential to Decarbonize the U.S. Manufacturing Sector by 2050 — *Betsy Dutrow, U.S. EPA*

**4:45-5:15 PM** **BREAK**

# Thursday, July 15 continued

**5:15-6:30 PM** **NETWORKING RECEPTION AND POST PANEL DEBRIEF**

- **Panel 1 Breakout (Zoom)**
  [Description TBD]
- **Panel 2 Breakout (Zoom)**
  [Description TBD]
- **Panel 3 Breakout (Zoom)**
  [Description TBD]
- **Panel 4 Breakout (Zoom)**
  [Description TBD]

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**Accepted "Alternate" Papers**

*Alternate papers are papers that have been selected for publication in the proceedings but may not be presented during the Summer Study.*

**Panel 1:**

- Is It a Magic Trick? Energy Efficiency Low/No Cost Measures in Industry — *Dustin Bailey, Guidehouse*
- Viral Content: Lessons Learned from COVID-19 for the Future — *Eric Mullendore, Bonneville Power Administration*

**Panel 2:**

- How Much Focus Should Go Towards Optimizing Inherently Compressed Air Systems vs. Phasing Them Out? — *Chris Wagner, Go Sustainable Energy*

**Panel 3:**

- Simulating a Manufacturing System Including an Air Compressor for Reducing Energy Costs — *Vansh Vyas, Louisiana State University*
- Prioritizing Relationships During the Pandemic — *Andrea McKenna, Cascade Energy*
- Benchmarking Energy and Sustainability: How Do Your Corporate Programs Stack Up? - *Danny Macri, U.S. EPA*

**Panel 4:**

- Initial Assessment of ISO 50001 Efficiency Improvements in Energy and Carbon Intensive Industrial Subsectors — *Douglas Nelson, Clemson University*
- Quantitative Comparison of Carbon Dioxide Emissions Reduction through Various Energy and Carbon Reporting Protocols — *Unique Karki, Lawrence Berkeley National Laboratory*
- To Co-digest or Not to Co-digest - *Sabarish Vinod, Lincus, Inc.*
- The Role of State Policy in Furthering Industrial Decarbonization via Energy Efficiency — *Andrew Hoffmeister, ACEEE*
- Industry in the Pandemic: Who's Up? Who's Down? Where to Focus — *James Siegel, Eversource*
- Sustainability Contracting to Reduce Emissions — *NSS Prithvi, Beroe*

# Thursday, July 15 continued

**Accepted "Alternate" Papers continued**

**Panel 4 continued:**

- Best Practices for Helping Governments Prioritize Equity in the Siting of Electric — *James Schroll, ABT Associates*
- Statewide Stakeholder Governance and Fostering EE Savings and GHG Reduction through New Regulatory Models — *Rob Neumann, Navigant*

# Tuesday, July 20-21

1:00-4:00 PM SEM SUMMIT (Zoom)

Hosted by the North American SEM Collaborative for the 5th Annual SEM Summit, The 2021 SEM Summit will provide a unique opportunity to virtually connect with the growing SEM community. This two-day event will offer live presentations, cutting-edge research, and special breakout sessions. Join utility professionals, program administrators, evaluators, and other energy efficiency professionals to hear customer perspectives, get updates from regional SEM collaboratives, and interact with the SEM experts.

# Thursday, July 22

1:00-4:00 PM Industrial Process Heating Decarbonization Workshop (Zoom)

One of the challenges to addressing GHG emissions from the industrial sector is decarbonizing industrial thermal processes. This workshop will bring together researchers and industrial experts to consider the applications of different process heat approaches and explore the RD&D and policies needed to realize their implementation. Several different approaches can be considered including shifting from fuel combustion to electricity or transitioning to low-carbon hydrogen or renewable fuels or thermal sources. An expanding toolbox of technologies and approaches needs to be matched with process needs while reducing energy and emissions. End your Summer Study experience at this engaging, interactive workshop .

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