



# IETC 2017

NEW ORLEANS  
JUNE 20-22

The Thirty-Ninth Industrial Energy Technology Conference



The Thirty-Ninth Industrial Energy Technology Conference

# Prelim Program

*Hosted By:*



**ENERGY SYSTEMS LABORATORY**  
TEXAS A&M ENGINEERING EXPERIMENT STATION



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# WELCOME

Industry is the largest and most diverse energy-consuming sector in the United States, utilizing one-third of the total energy used. Many energy-intensive industries such as petrochemicals, aluminum, steel, refining and forest products are limited in their mix of energy sources and raw materials that can be used in their processes. Many opportunities exist, or must be found, to reduce energy usage and feedstock issues in order to sustain this wide range of industrial manufacturing operations. Come to the IETC and be a part of the solution as these problems are confronted and solved by industry leaders.

The Industrial Energy Technology Conference (IETC) is a national conference 39 years running that provides answers to energy and related environmental concerns affecting industrial facilities and processes. The conference kicks off with the 25th Energy Managers Workshop, and continues with featured speakers during two days of technical presentations.

Coffee and meal breaks on both conference days and an evening reception on Wednesday, June 21 provide additional opportunities for informal interaction. One-on-one discussions with speakers, panelists, and other attendees frequently lead to sharing of experiences where you can find out what works, what does not work, what to watch out for, and how to improve your company's bottom line.

The IETC Exhibit space is in the 10th floor of the hotel, next to the registration and coffee break area, and the luncheon ballrooms, and will be open all hours of the conference and especially during the coffee breaks! Come by and visit and see what our exhibitors have to show you.

The IETC staff and your hosts are committed to providing you with timely, practical and useful energy-related information. We want to help you expand your knowledge and increase your value as an employee or independent consultant. We want you to profit from the technical expertise and experience of our speakers and gain meaningful insights by discussing your interests and concerns with other professionals. That's what the IETC is all about. It is very unique technically and has been described by hundreds of previous attendees as "the one industrial energy technology conference you cannot afford to miss!"

James A. Eggebrecht, PE, Executive Director  
Industrial Energy Technology Conference

# Conference Schedule

## Tuesday, June 20th

Energy Manager Workshop

8:00 am - 5:00 pm

## Wednesday, June 21st

Opening & Plenary

8:00 am

Technical Sessions # 1-4

9:15 am - 11:55 am

Award Luncheon

Noon - 1:30 pm

Technical Sessions # 5-7

1:45 pm - 5:00 pm

Hosted Reception

5:30 pm - 7:30 pm

## Thursday, June 22nd

Technical Sessions # 8-11

8:30 am - 12:00 pm

Luncheon

Noon - 1:30 pm

# INFORMATION

## How to contact us:

General conference information, presentations, speakers

James A. Eggebrecht

Executive Director

Phone: (979) 845-1508

Email: [jegge@tamu.edu](mailto:jegge@tamu.edu)

Other information, including registration:

Kimberly Greer

Conference Manager

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Get updated IETC information at

<http://ietc.tamu.edu/>

# PROGRAM AT A GLANCE

## Tuesday, June 20 – Energy Managers Workhop

7:00 am – 5:00 pm	Registration and Information
8:00 am – 5:00 pm	Energy Managers Workshop
12:00 pm – 1:00 pm	Energy Managers Workshop Lunch

## Wednesday, June 21 – Day 1 of Conference

7:00 am – 5:00 pm	Registration and Information			
7:15 am – 7:50 am	Conference Authors/Presenters Breakfast			
8:00 am – 8:25 am	Opening Welcome			
8:25 am – 8:40 am	American Chemistry Council Recognition of Energy Awards			
8:40 am – 9:05 am	Plenary Address - TBA			
<b>Technical Sessions 1 - 4</b>				
9:15 am – 11:50 am	1 – American Chemistry Council Award Winners 1	2 – Tools for Energy Conservation	3 – Energy Storage Options	4 – Water and Energy Issues
10:20 am – 10:50 am	Break Time Sponsored by Soteica Visual Mesa L..L.C.			
12:00 pm – 1:30 pm	<b>IETC Luncheon &amp; Keynote Address</b>			
<b>Technical Sessions 5 - 7</b>				
1:45 pm – 5:00 pm	5 – Compressed Air	6 – Combined Heat & Power	7 – Improvements in Plant Utility Systems	
2:50 pm – 3:20 pm	Break Time Sponsored by Soteica Visual Mesa L..L.C.			
5:30 pm – 7:30 pm	Reception			

## Thursday, June 22 – Day 2 of Conference

7:30 am – 2:00 pm	Registration and Information			
<b>Technical Sessions 8 - 11</b>				
8:30 am – 12:00 pm	8 – American Chemistry Council Award Winners 2	9 – Steam Plants & Equipment	10 – Energy Impact Analysis	11 – Modeling and Software
9:35 am – 10:10 am	Break Time Sponsored by Soteica Visual Mesa L.L.C.			
12:00 pm – 1:30 pm	<b>IETC Awards Luncheon</b>			

# EMWS SCHEDULE

## 25th Energy Managers Workshop Schedule Energy Management: Strategies and Successful Applications

**Tuesday, June 20**

**8:00 am - 5:00 pm, lunch included**

Learn the strategies that all energy managers must know about NOW, and learn how successful managers have applied what they have learned. Managers, who are doing just that, will be the instructors.

Confirmed topics and speakers are:

- More than Just Energy Reduction: Tangible Benefits that Make Fan Efficiency Upgrade Decisions Easy to Make. Vern Martin, FLOWCARE Engineering, Inc.
- Energy Reliability in Industry, Thomas R. Theising, Sustainable Energy Solutions, LLC.
- Resource Productivity – It's Only Natural, Sharon Nolen, Eastman Chemical Company.
- Presenting the Value of Energy Management to Operations and the Facility Financial Analyst, James Robinson, DES Global LLC..
- The Energy Managers Essential Toolkit, Jimmy Kumana, Kumana & Associates.
- DOE 50001 Ready, Jay Wrobel, U.S. Department of Energy.
- TBA

More up-to-date information on the remaining speakers is found at <http://ietc.tamu.edu>



# CONFERENCE SESSIONS

## Wednesday Morning, June 21

7:00 am - 5:00 pm	Registration
7:15 am - 7:50 am	Conference Authors/Presenters Breakfast
8:00 am - 8:25 am	Opening Welcome by Conference Hosts
8:25 am - 8:40 am	American Chemistry Council Recognition of Energy Awards
8:40 am - 9:05 am	Plenary Address by TBA
10:20am - 10:50am	Break Time Sponsored by Soteica Visual Mesa L.L.C.
9:15 am - 11:50 am	Sessions 1 - 4

## Session 1 - American Chemistry Council Award Winners 1

Four invited speakers from the American Chemistry Council Responsible Care Energy Award Winners for 2016.

## Session 2 - Tools for Energy Conservation

“Why Energy Should be a C-Suite Priority,” Jay Zoellner, EnerNoc.

“Tools for Accelerating Adoption of ISO 50001 in the US,” Peter Langlois, U.S. Department of Energy.

“Industrial Energy Efficiency Programs: How to Ensure the Value Proposition to Manufacturers,” Robert Lung, US Department of Energy.

“U. S. DOE’s Energy Treasure Hunt Exchange In-Plant Trainings – DOE Resources, Early Results and Lessons Learned.” Walt Brockway and Sachim Nimbalkar, Thomas Wenning, and Kiran Thirumaran, Oak Ridge National Laboratory, and Robert Bruce Lung, U.S. Department of Energy.

## Session 3 - Energy Storage Options

“Hybridization of a Gas Turbine for Compressed Air Energy Storage,” Adefolaoluwami Odeniyi, Stephen Terry, and John Nickel, Department of Mechanical and Aerospace Engineering, North Carolina State University.

“ONCOR Battery Storage Project in Central Texas,” David Chiesa, S & C Electric

“Multi-Hour Energy Storage: The Thermal Energy Storage Option,” John S. Andrepont, The Cool Solutions Company.





## Session 4 - Water and Energy Issues

“Plant Water Profiler Tool for Industry,” Sachin Nimbalkar, Oak Ridge National Laboratory.

“Mitigation of Scaling and Fouling in Membrane Distillation Process for Industrial Water Treatment and Reuse,” Markus Lesemann, Young Chul Choi, Zachary Hendren, RTI International, and Hervé Buisson, Veolia Water Technologies North America.

“A Proven Methodology for Studying Energy-Water Technology Efficiency: Findings from the Seawater Desalination Bandwidth Study,” Prakash Rao, Lawrence Berkeley National Laboratory, Joe Cresko, Department of Energy, Sabine Brueske, Energetics, Arian Aghajanzadeh, Lawrence Berkeley National Laboratory and Caroline Dollinger, Energetics.

## 12:00 pm - 1:30 pm Luncheon and Keynote Address

### Wednesday Afternoon, June 21

1:45 pm - 5:00 pm      Sessions 5 – 7

2:30 pm - 3:20 pm      Break Time Sponsored by Soteica Visual Mesa L.L.C.

## Session 5 - Compressed Air

“Ten Most Productive Compressed Air System Questions” Thomas Theising, Sustainable Energy Solutions LLC.

“Compressed Air System Design and Custom Controls – Ideas to Improve Efficiency and Performance,” Mark Ames, John Henry Foster Company.

“Reducing Site Cost Through Ultrasonic Air Leak Surveys and Repairs,” James Nipper, Petro Chemical Energy.

“Understanding and Identifying the Value in Energy Reductions: Utilizing a Dewpoint Demand Controller with Dual-Tower Desiccant Dryers,” Henry Van Ormer, Air Power USA.

“Development of a Compressed Air Flow Meter Installed at the Compressor Outlet,” Anthony Taylor, Glenn Cunningham, and Ehsan Languri, Tennessee Tech University.

## Session 6 - Combined Heat & Power

“Financing CHP Projects,” Anna Shipley and Anne Hampson, ICF International, and Claudia Tighe, US Department of Energy

“Optimal Integration of Steam Turbines for Industrial CHP Applications,” Jimmy D. Kumana, Kumana and Associates.

“Capacity Utilization, Efficiency Trends and Economic Risks for Modern Combined Heat & Power Installations,” David Dismukes, Center for Energy Studies, Louisiana State University.

“The Value of Metered Data in CHP Design,” Jesse Remillard and Richard Doughty, Energy and Resource Solutions.

“Combined Heat and Power (CHP) a Lowest Cost Resource in Utility Planning,” Meegan Kelly, Anna Chittum, American Council for an Energy Efficient Economy, Ken Duvall and Levi Hoiriis, Sterling Energy Group.

## Session 7 - Improvements in Plant Utility Systems

“Daily Management of Primary and Secondary Utilities at General Mills,” Leslie Marshall, General Mills.

“Maximizing Return on Invested Capital for the Enterprise Energy Management Program,” Kevin Quinn, Pactiv.

“Energy Efficiency Improvements for Process Utility Systems at Garlock Sealing Technologies,” Richard F. Rappa and Andrew Geoghan, CHA Consulting, Inc.

“Energy Efficiency Retrofit Options in Process Evaporation,” Bryan W. Hackett, kW Engineering, Inc.

“Investigation of Spray Characteristics of a Novel Fuel-flexible Pulse-Mode Injector for Ultra-Low Emission Internal Combustion Engines,” Lulin Jiang, Vu T Danh, and Spencer Comeaux, Department of Chemical Engineering, University of Louisiana at Lafayette.

## 5:30 pm - 7:30 pm Reception

### Thursday Morning, June 22

8:30 am - 12:00 pm      Sessions 8 - 11

9:35 am - 10:10 am      Break Time Sponsored by Soteica Visual Mesa L.L.C.

## Session 8 - American Chemistry Council Award Winners 2

Five invited speakers from the American Chemistry Council Responsible Care Energy Award Winners for 2016.

## Session 9 - Steam Plants & Equipment

“Steam Trap Management: Do Something, Anything, ...Please,” James R. Risko, TLV Corporation.

“Thermodynamic Analysis of Steam Turbines for Industrial Applications,” Jimmy D. Kumana, Kumana and Associates.

“Improving Plant Efficiency Through Faster and More Stable Boiler Dynamics,” Ben Janvier and Marc Guerin, Eneo Solutions.

“Tuning Up Your Facility’s Steam Trap Management,” Cameron Kinney, Jon Maxwell, and Nathan Throop, Energy and Resource Solutions.

“Energy Cost Optimization in a Sugar Industry,” Ven V. Venkatesan, VGA Engineering Consultants, Inc.



## Session 10 - Energy Impact Analysis

“Smart Manufacturing Technologies and Data Analytics for Improving Energy Efficiency in Industrial Energy Systems” Sachin Nimbalkar, Thomas Wenning, Daryl Cox, Wei Guo, and Kiran Thirumaran, Oak Ridge National Laboratory, and Joe Cresko, US Department of Energy.

“Manufacturing Energy Bandwidth Studies,” Sabine Brueske and Heather Liddell, Energetics Incorporated, Joe Cresko, U.S. Department of Energy, and Alberta Carpenter, National Renewable Energy Laboratory.

“Lean Manufacturing Principles and Their Impact on Process Energy Efficiency,” Mike Stowe, Advanced Energy.

“A Techno-Economic Assessment of Centralized Carbon Capture in US Petroleum, Refineries,” William R. Murrow III, Lawrence Berkeley National Laboratory, John Marano, JM Energy Consulting Inc. and Yuan Yao, North Carolina State University.

“Demand Controlled Ventilation: Opportunities for Energy Reduction and the Pros and Cons of this Approach,” Vern Martin, FLOWCARE Engineering, Inc.

## Session 11 - Modeling and Software

“Development of the Extended Motor Product (XMP) Database: A New Tool for Energy Efficiency Programs and Equipment Manufacturers,” Ethan Rogers, American Council for an Energy Efficient Economy.

“DOE 50001 Navigator,” Thomas Wenning, Oak Ridge National Laboratory.

“TBA,” Soteica Visual Mesa L.L.C.

“Next-Generation Utilities Optimization for Refineries and Large-scale Chemical Production Sites,” Penny Stanger, Alfredo Ramos, and Gerardo Sanchis, Process Systems Enterprise Inc.

**12:00 pm - 1:30 pm IETC Awards Luncheon**

## **IETC Staff**

**James A. Eggebrecht**, Executive Director  
**Kimberly Greer**, Conference Manager

## **Advisory Board**

Joe Almaguer,  
Walter Brockway, Brockway Consulting  
Neil Davies, Spirax Sarco, Inc.  
R. Neal Elliott, American Council for an Energy Efficient Economy  
Peter Garforth, Garforth International llc  
Scott Harrison, TXU Energy  
Dave Lauterbach, DuPont  
R. Bruce Lung, U. S. Department of Energy  
Michaela Martin, ICF International  
Vern Martin, Flowcare Engineering Inc.  
Cynthia Mascone, Chemical Engineering Progress  
Paul Miller, Louisiana Department of Natural Resources  
Sharon Nolen, Eastman Chemical Company  
Bryan Rasmussen, Texas A&M University  
James Robinson, DES Global, LLC  
Scott Rouse, Energy @ Work  
Steve Schultz, 3M Company  
Eric Soucy, Natural Resources Canada  
Thomas R. Theising, Sustainable Energy Solutions, LLC  
Vince Torres, Texas Industries of the Future  
Eddy Trevino, Texas State Energy Conservation Office  
Kirtan K. Trivedi, ExxonMobil Chemical Company  
Vestal Tutterow, Project Performance Corporation  
Thomas Wenning, Oak Ridge National Laboratory  
Jay Wrobel, US Department of Energy  
Jay Zoellner, EnerNOC

## **Hosts**

Louisiana Department of Natural Resources  
Energy Systems Laboratory, Texas A&M University

## **Sponsors**

American Chemistry Council  
Louisiana Department of Natural Resources  
Soteica Visual Mesa LLC  
Spirax Sarco, Inc.  
Texas State Energy Conservation Office/Texas Industries of the Future  
TLV Corporation  
US Department of Energy, Advanced Manufacturing Office

Get updated IETC information at:  
<http://ietc.tamu.edu/>

## **Hotel Information**

IETC 2017 will be at the beautiful Loews New Orleans Hotel located three blocks from the historic French Quarter in New Orleans, Louisiana. The reduced IETC conference rate is \$179/night single or double occupancy. The hotel deadline for this rate is May 24, 2017. The Loews New Orleans Hotel is located at 300 Poydras Street.

Make your hotel reservations through the IETC website: <http://ietc.tamu.edu/>

Visit the Loews New Orleans Hotel website: <http://www.loewshotels.com/en/New-Orleans-Hotel> to see “Accommodations,” and then “Services and Amenities,” followed by “Drink and Dine,” for a sense of the ambience of this beautiful hotel.

You may also contact the hotel by:

(504) 595-3300 voice

(866) 211-6411 reservations

300 Poydras Street

New Orleans, Louisiana 70130

Visit the New Orleans Convention and Visitors Bureau site <http://www.neworleanscvb.com/> to learn more about New Orleans’ history, culture, tales of the city, and the various festivities taking place at the time of the conference.

## **Traveling to the Hotel**

See the hotel website <http://www.loewshotels.com/en/New-Orleans-Hotel/index/map> for directions to the hotel at 300 Poydras Street, New Orleans.

## **Airport Shuttle Information**

Website found at <http://www.airportshuttleneworleans.com/>

If purchasing your ticket(s) at the airport, proceed to the baggage claim area on the ground level. After you have retrieved your luggage, proceed to the Airport Shuttle Ticket Desk, located across from all baggage claim carousels. Tickets from the airport and back are \$44 round trip, per person.

## **Conference Registration**

You can register on-line at <http://ietc.tamu.edu/>