



IETC **MAY 20-23**
2014
New Orleans



The Thirty-Sixth Industrial Energy Technology Conference

PROGRAM

Hosted By:



ENERGY SYSTEMS LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION



IETC.TAMU.EDU



On behalf of the hosts and sponsors of the thirty-sixth Industrial Energy Technology Conference (IETC), welcome! Our program brings together nationally prominent experts from many areas of industrial energy management.

The IETC staff and your hosts, Texas A&M University System's Energy Systems Laboratory and the Louisiana Department of Natural Resources, along with our many co-sponsors are committed to providing all attendees with a wealth of information that will help them improve the performance of their companies--something to take home and use immediately!

This year's 2014 Energy Managers' Workshop builds on its past successes and will again provide a great opportunity for you to expand your energy management proficiency. Eight top energy managers and industry leaders present an extensive workshop agenda entitled: "Energy Management: Strategies and Successful Applications." The conference will wrap up with a two post-conference workshops. Spirax Sarco Inc. will present "Steam System Workshop" and Christopher Russell will present "Business Case Bootcamp for Energy Managers".

We are confident that you will profit from the experience and technical expertise of our presenters and panelists, and best of all, the interaction with so many energy professionals in one place.

*Malcolm Verdict, C.E.M., Chair
Industrial Energy Technology Conference*

Major Events

Technical Sessions

The traditional technical sessions consist of 25-minute presentations followed by a 5-minute question and answer period after each presentation. There will be a 5-minute break between papers to permit movement of conferees between sessions.

Workshops

The Pre-Conference Energy Managers Workshop continues for its twenty-second year, exploring the topic of "Energy Management: Strategies and Successful Applications." There are two post-conference workshops this year.

Sponsored Reception

The Welcome Reception at 5:30 p.m. on Wednesday evening May 21 is sponsored by Champion Energy Services.

Sponsored Breakfast – Wednesday 7:15 – 8:00 am

The Session Chair and Presenter Breakfast is sponsored by ICF International, Feliciana Room 10th Floor
Breakfast for all others in the Parish Hall, 10th Floor

Sponsored Coffee Breaks

Wednesday's & Thursday's Breaks are sponsored by Soteica Visual MESA LLC.

Wednesday Keynote Speakers

Features Nick Jones of Exxon Mobil Corporate Strategic Planning and Dr. Helmuth Ludwig of Siemens Industry Sector USA.

Thursday Awards Lunch

Features IETC Energy Awards presentations to DuPont Protection Technologies and Dr. R. Neal Elliott of the American Council for an Energy Efficient Economy.

Additional Information

Proceedings

The IETC Proceedings are available on the IETC website:
<http://ietc.tamu.edu/program-2>

Call for Papers

Abstracts are now being accepted for the Thirty-seventh Industrial Energy Technology Conference. Interested authors should submit one electronic abstract of not more than 400 words by no later than September 22, 2014 to:

James A. Eggebrecht
IETC Executive Director

Phone: (979) 845-1508
Email: jim@esl.tamu.edu

Continuing Education & Professional Development Credits

The Industrial Energy Technology Conference and the workshops meet the criteria for continuing education and professional development hours required by many state professional engineering boards. Check with Alissa or Jim at the registration desk for information and a CEU form.

ENERGY MANAGERS WORKSHOP SCHEDULE

Tuesday, May 20

7:30 - 8:00 a.m. Registration and Breakfast in Parish Hall, 10th Floor
Workshop held in Feliciano Room, 10th Floor

8:00 - Opening Remarks – James Eggebrecht, Texas A&M University

8:15 - 9:15 "Integrated Industrial Site Planning,"
Peter Garforth, Garforth International llc

9:15 - 9:45 "The Gulf Coast Industrial Investment Renaissance and
New CHP Development Opportunities,"
David E. Dismukes, Center for Energy Studies, Louisiana
State University

~ 30 minute break ~

10:15 - 11:00 "Building an Energy Team at a Site,"
Fred C. Schoeneborn, FCS Consulting Services Inc.

11:00 - 11:45 "Identifying and Quantifying Opportunities in Industrial
Plants,"
Walter Brockway, Alcoa Inc.

12:00 - 1:00 p.m. – Lunch in St. Landry Room, 9th Floor

1:00 - 1:30 "Energy Data Capture and Reporting that Drives Strategic
Decisions – Case Study from a Major Manufacturer,"
Peter Garforth, Garforth International llc

1:30 - 2:15 "Measuring Non-Energy Benefits of Industrial Energy
Efficiency: The Current Frontier?,"
Christopher Russell, Energy Pathfinder Management
Consulting LLC

~ 30 minute break ~

2:45 - 3:30 "Industrial Opportunities from Federal GHG Emissions
Regulations,"
R. Neal Elliott, American Council for an Energy Efficient
Economy

3:30 - 4:15 "Control Boiler MACT Emissions through Work Practices
and Energy Management,"
James E. Robinson, DES Global, LLC

4:15 - 4:40 "SEEA Industrial Energy Efficiency Survey: Drivers of Value
for Manufacturers"
Robert Bruce Lung, President – IEEA

4:40 - 4:50 Wrap-up, critiques & dismissal

Steam Best Practices Workshop

Friday, May 23, 8:00 am – 2:00 pm; Breakfast at 7:00 am & Lunch Included
East Feliciana Room, 10th Floor
Workshop Instructor: Mike Mabry & Neil Davies, Spirax Sarco

8:00 am Welcome and Introductions

8:20 am Steam System Fundamentals - What is steam?

- Basic Steam Properties
- Generation of Steam
- Steam Distribution
- Condensate Line Sizing

9:40 am - Break

10:00 am Steam Trapping

- Steam Trap Types
- Operating Characteristics
- System Requirements
- Matching steam trap Characteristics & system needs

11:00 am Process Heating Equipment

- Condensate Drainage
- Vacuum
- Backpressure
- Steam Trap pressure differential
- Potential Problems & Solutions

12 noon - Lunch

1:00 pm Condensate Recovery

- Energy & Utilities cost justification
- Condensate pump types – Electric & Non-electric
- Problems & Solutions

2:00 pm - Adjourn

Business Case Bootcamp for Energy Managers Workshop

Friday, May 23, 8:00 am – 2:00 pm; Breakfast at 7:00 am & Lunch Included
West Feliciana Room, 10th Floor
Workshop Instructor: Christopher Russell, Energy Pathfinders
Management Counseling LLC

8:00 am Welcome and Introductions

8:20 am Setting the Stage: Facilities Management Version 1.0

8:50 am The Role of an Energy Manager

9:40 am - Break

10:00 am Energy, Money, and Business

11:00 am Monetizing Energy Choices

12 noon - Lunch

1:00 pm Business Plans for Implementation

2:00 pm - Adjourn

1 Conference Sessions DAY ONE Wednesday Morning, May 21

- 7:00 - 5:00 Registration, Parish Hall, 10th Floor
- 7:00 - 8:00 Breakfast for Authors and Session Chairs in Feliciana Room, 10th Floor, sponsored by ICF International
All other attendee breakfast in Parish Hall, 10th Floor
- 8:00 - 8:25 Plenary and Welcoming Remarks: Malcolm Verdict, IETC and Energy Systems Laboratory, Louisiana Ballroom, 10th Floor
- 8:25 - 8:40 American Chemistry Council Recognition of Energy Awards
- 8:40 - 9:05 Keynote Speaker: Nick Jones, Exxon Mobil Corporate Strategic Planning
- 9:15 - 11:50 Sessions 1 - 5

Session 1 American Chemistry Council Award Winners 1

Session Chair: Dave Lauterbach, DuPont
LaFourche Room, 9th Floor

- 9:15 - 9:45 "Finding More Free Steam from Waste Heat," Michael D. Stremow, Dow Corning Corporation.
- 9:50 - 10:20 "Baytown Olefins Plant Continuous Energy Optimization," Matthew M. Neely, ExxonMobil Chemical Company.
- 10:20 - 10:45 Coffee Break and Exhibits - Parish Hall, 10th Floor

Session 2 Bass Connections Program in Industrial Energy Efficiency

Session Chair: Gale Boyd, Duke University
Pointe Coupee, 9th Floor

- 9:15-9:45 "Overview of the Duke University Bass Connections Program in Industrial Energy Efficiency," Gale Boyd, Duke University.
- 9:50-10:20 "Managing Carbon with Renewable Energy and Efficiency in Nissan North American Assembly Plant," Robinson Ford, Justin Ong, Jake Reeder, Vikram Sridhar, and Rica Zhang, Duke University.
- 10:20-10:45 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:45-11:15 "Modeling Weather Sensitive Loads in Paint Booths: An Engineering/Econometric Analysis of a General Motors Assembly Plant," Jingwei Deng, Mark Gockowski, Josh Laveman, Katie MacAdam, and Kunyao Yu, Duke University.
- 11:20-11:50 "Development of Statistical Energy Analysis Tools for Toyota's Motors Manufacturing North American," Jason Chen, Robert Collins, Gary Gao, Daniel Schaffer, and Jill Wu, Duke University.

Session 3 Energy - Getting the Big Picture

Session Chair: Peter Garforth, Garforth International, llc
St. Landry Room, 9th Floor

- 9:15-9:45 "Embedding Sustainability into Manufacturing Organizations," Vestal Tutterow, Project Performance Company.
- 9:50-10:20 "The Role of Professional Risk in Implementing Industrial Energy Improvements," Christopher Russell, Energy Pathfinder Management Consulting, LLC.
- 10:20-10:45 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:45-11:15 "The Benefits and Barriers of Smart Manufacturing," Ethan Rogers, American Council for an Energy Efficient Economy.
- 11:20-11:50 "Big Efficiency for Small Manufacturing," Daniel Trombley, American Council for an Energy Efficient Economy.

Session 4 Equipment Analysis and Related Issues

Session Chair: Jim Robinson, DES Global, LLC
St. Tammany Room, 9th Floor

- 9:15-9:45 "Development of a New Extended Motor Product Label for Industrial Energy Efficiency," Ethan Rogers, Robert Boteler, and R. Neal Elliott, American Council for an Energy Efficient Economy.
- 9:50-10:20 "Boiler MACT Assessments at BASF," Thomas R. Theising, BASF Corporation.
- 10:20-10:45 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:45-11:15 "ISO 50001 – Case Studies and Lessons Learned So Far," Vestal Tutterow, Project Performance Company.

Session 5 Superior Energy Performance

Session Chair: Paul Scheihing, US Department of Energy
Terrebonne Room, 9th Floor

- 9:15-9:45 "Achieving Superior Energy Performance," Paul Scheihing, Advanced Manufacturing Office, U.S. Department of Energy.
- 9:50-10:20 "Superior Energy Performance case study at 3M Canada, Brockville, Ontario facility," Andrew Hejnar, 3M Canada.
- 10:20-10:45 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:45-11:15 "Superior Energy Performance case study at Nissan," Brett Rasmussen, Nissan North America, Canton, Mississippi Facility.
- 11:20-11:50 "Superior Energy Performance case study at Schneider Electric," Edwin Willhite, Schneider Electric, Smyrna, Tennessee Facility.

Conference Sessions DAY ONE Wednesday Afternoon, May 21

- 12:00 - 1:30 IETC Luncheon – Keynote Speaker: Dr. Helmuth Ludwig, Chief Executive Officer, Siemens Industry Sector North America
Louisiana Ballroom, 10th Floor
- 1:45 - 5:00 Sessions 6 - 10
- 2:50 - 3:15 Coffee Break and Exhibits - Parish Hall, 10th Floor
- 5:30 - 7:00 Welcome Reception Sponsored by Champion Energy in La Piazza d'Italia, outdoors next to hotel entrance. Entertainment, food & prizes!

Session 6 American Chemistry Council Award Winners 2

Session Chair: Ray Ratheal, Eastman Chemical
LaFourche Room, 9th Floor

- 1:45-2:15 "Freeport Anone II Advanced Process Control,"
Dennis Eisele, BASF Corporation.
- 2:20-2:50 "Data Center: Efficiency & Sustainability at Work,"
George Flowers, SABIC.

Session 7 The Energy/Water Nexus in the Process Industries

Session Chair: Kathey Ferland, Texas Industries of the Future
Pointe Coupee, 9th Floor

- 1:45-2:15 "Sustaining Industrial Energy Efficiency in Process Cooling in a Potentially Water-Short Future,"
Kathey Ferland, Texas Industries of the Future.
- 2:20-2:50 "Metrics and Methodologies for Evaluating Energy and Water Impacts of Alternative Process
Cooling Systems in a Typical Chemical Plant," Tom Carter, Johnson Controls.
- 2:50-3:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 3:15-3:45 "Thermosiphon Cooler Hybrid System Providing Water Resiliency in a Typical Chemical Plant,"
Tom Carter, Johnson Controls.
- 3:50-4:20 "The Energy-Water Nexus: Implications for Energy Efficiency," Michael R. Muller, Rutgers
University, John Gardiner, Boise State University, Michael B. Muller, Rutgers University, and Dev
Shrestha, University of Idaho.

Session 8 International Industrial Energy Conservation Efforts

Session Chair: Michaela Martin, ICF International
St. Landry Room, 9th Floor

- 1:45-2:15 "Accelerating Energy Management Globally," Paul
Scheihing and Graziella Siciliano, U. S. Department of
Energy, Tracy Evans and Pamela de los Reyes,
Energetics Incorporated.
- 2:20-2:50 "Perform, Achieve & Trade (PAT): An Innovative
Mechanism for Enhancing Energy Efficiency of
Industrial Sector in India," Michaela Martin, ICF
International.
- 2:50-3:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 3:15-3:45 "China's Energy Management Systems Program for
Industrial Enterprises," Yongmiao Yu, Robert Taylor,
Julia Renaud, and Bruce Hedman, Institute for
Industrial Productivity.
- 3:50-4:20 "Lessons Learned: Guidance Based on Early
Experiences of Implementing ISO 50001 and SEP,"
Paul Monaghan, Enerit Ltd.
- 4:25-4:55 "Energy Optimization Management in a
Petrochemical Plant: A self-development case,"
Eduardo Guimarães de Magalhães & Renata Beck,
Eficiência e Confiabilidade Energética Unidade
Insumos Básicos, Braskem S.A.

Session 9 Equipment Analysis

Session Chair: Thomas Theising, BASF
Corporation
St. Tammany Room, 9th Floor

- 1:45-2:15 "Low Hanging Fruit Grows
Back," Thomas R. Theising, BASF
Corporation.
- 2:20-2:50 "Energy Cost Optimization in a
Modern Dry Process Cement Plant,"
Ven V. Venkatesan, VGA Engg.
Consultants Inc.
- 2:50-3:15 Coffee Break and Exhibits – Parish
Hall, 10th Floor
- 3:15-3:45 "Thermal Energy Storage – It's
Not Just for Electric Cost Savings
Anymore," John S. Andrepont, The
Cool Solutions Company.
- 3:50-4:20 "Steam System Data Management,"
Darrell Roberts, Wal-Tech Valve.
- 4:25-4:55 "Combined Heat and Power for
Chemical Industry and Petroleum
Refining Facilities," Darrell
Thornley and Isaac Panzarella, U.S.
Department of Energy CHP Technical
Assistance Partnerships.

Session 10 Metering for Energy Conservation

Session Chair: Eric Soucy, Natural Resources
Canada
Terrebonne Room, 9th Floor

- 1:45-2:15 "Standards Development and
Deployment of a Comprehensive,
Integrated, Open-standard Metering
and Equipment Control Networking
Protocol Infrastructure for Effective
Facility Energy Management of a
Large-scale Industrial Site in Alberta,
Canada," Ron Bernstein, RBCG, LLC.
- 2:20-2:50 "Software Tools & Training Program:
For the Efficient Design and
Operation of Industrial Processes,"
Eric Soucy, Natural Resources
Canada.
- 2:50-3:15 Coffee Break and Exhibits – Parish
Hall, 10th Floor
- 3:15-3:45 "Creating Reliable Data & Reporting
to Support Strategic Energy
Management at Corning - Case
Study," Peter Garforth, Garforth
International, llc.

3 Conference Sessions DAY TWO Thursday Morning, May 22

- 8:00 - 11:00 Registration for New Arrivals
- 8:30 - 11:55 Sessions 11 - 14
- 9:35 - 10:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 12:00 - 1:30 IETC Energy Awards Luncheon, Louisiana Ballroom, 10th Floor

Session 11 American Chemistry Council Award Winners 3

Session Chair: Frank Roberto, ExxonMobil Chemical Company
Feliciano Room, 10th Floor

- 8:30-9:00 "BASF Corporate Energy Management Process," Ty Geiger, BASF Corporation
- 9:05-9:35 "Continuous Improvement Projects Reduce Energy Consumption," Eric Niemeyer, Chevron Phillips Chemical Company LP.
- 9:35-10:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:15-10:45 "Baton Rouge Complex Steam Real Time Optimization," Tope Iyun, ExxonMobil Chemical Company.
- 10:50-11:20 "Baytown Chemical Plant Dynamic Matrix Control (DMC) Energy Reduction," David Hokanson, ExxonMobil Chemical Company.

Session 12 Offshore Energy Conversion from Wave Energy

Session Chair: Scott Harrison, TXU Energy
Terrebone, 9th Floor

- 8:30-9:00 "Wave Energy Conversion Overview and it's Renewable Energy Potential for the Oil and Gas Industry," Jeremiah C. Pastor, Yucheng Liu, and Yangqing Dou, University of Louisiana – Lafayette.
- 9:05-9:35 "Wave Energy Resource Analysis for Use in Wave Energy Conversion," Jeremiah C. Pastor, Yucheng Liu, and Yangqing Dou, University of Louisiana – Lafayette.
- 9:35-10:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:15-10:45 "Potential of Development and Application of Wave Energy Conversion Technology in the Gulf of Mexico," Kelly L. Guiberteau, Yucheng Liu, Jim Lee, and Theodore A. Kozman, Department of Mechanical Engineering, University of Louisiana – Lafayette.
- 10:50-11:20 "Guidelines in Wave Energy Conversion System Design," Kelly L. Guiberteau, Theodore A. Kozman, Jim Lee, and Yucheng Liu, Department of Mechanical Engineering, University of Louisiana – Lafayette.

Session 13 Pneumatic Systems Energy Usage

Session Chair: Vestal Tutterow, Project Performance Company
St. Landry Room, 9th Floor

- 8:30-9:00 "Compressed Air System Analysis and Retrofit for Energy Saving – An Industrial Case Study," Andrew Chase Harding and Darin Nutter, University of Arkansas – Fayetteville.
- 9:05-9:35 "Using Outside Air for Flooded Oil Screw Compressors at an Industrial Facility," David G. Hunt, Schneider Electric, and Stephen Terry, North Carolina State University.
- 9:35-10:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:15-10:45 "A New Approach for Determining Optimal Air Compressor Location in a Manufacturing Facility to Increase Energy Efficiency," Joel Zahlan, University of Miami Industrial Assessment Center, Mesut Avci, The Cadmus Group, Inc., and Shihab Asfour, University of Miami Industrial Assessment Center.
- 10:50-11:20 "Recovering Energy with a Compressed Air System Program," James Nipper, Petro Chemical Energy, Inc.

Session 14 Corporate Energy Programs that Produce Results

Session Chair: Walter Brockway, Alcoa Inc.
St. Tammany Room, 9th Floor

- 8:30-9:00 "Life Cycle Assessment and Sustainability of Chemical Products," Abdelhadi Sahnoune, ExxonMobil Chemical Company.
- 9:05-9:35 "Energy Management: When Good is Not Good Enough," Sharon L. Nolen, Eastman Chemical Company.
- 9:35-10:15 Coffee Break and Exhibits – Parish Hall, 10th Floor
- 10:15-10:45 "Organized Approach to an Energy Walk Through," Thomas R. Theising, BASF Corporation.

4 Conference Sessions DAY TWO Thursday Afternoon, May 22

- 12:00 - 1:30 IETC Energy Awards Luncheon, Louisiana Ballroom, 10th Floor
Award Recipients: DuPont Protection Technologies and Dr. R. Neal Elliott, American Council for an Energy Efficient Economy
- 1:45 - 3:20 Sessions 15 - 17
- 2:50 - 4:00 Coffee Break, Parish Hall, 10th Floor

Session 15 **Texas A&M University Energy Research and Analysis**

Session Chair: Billy Williamson, Louisiana Department of Natural Resources
Feliciana Room, 10th Floor

- 1:45-2:15 "Realizing Real Time Energy Analysis for Industrial Energy Audits," Franco J. Morelli and Bryan Rasmussen, Texas A&M University.
- 2:20-2:50 "Impact of Control System Technologies on Industrial Energy Savings," Priyam Parikh and Bryan Rasmussen, Texas A&M University.
- 2:55-3:25 "Integration of Multiple Sensors with Embedded Data Acquisition for Automation of Lighting Energy Assessment," Trevor J. Terrill, Christopher Bay, Bryan Rasmussen, Texas A&M University.

Session 16 **Energy Usage Analysis on a National Scale**

Session Chair: Eddy Trevino, Texas State Energy Conservation Office
Terrebonne Room, 9th Floor

- 1:45-2:15 "U.S. Manufacturing Energy Use and Loss, the Big Picture," Sabine Brueske and Ridah Sabouni, Energetics Incorporated.
- 2:20-2:50 "Manufacturing Energy Bandwith Studies - Chemical, Peroleum Refining, Pulp and Paper, and Iron and Steel Sectors," Sabine Brueske, Energetics Incorporated, Joe Cresko, U.S. Department of Energy, Alberta Carpenter, National Renewable Energy Laboratory.

Session 17 **Using 'Big Data' to Minimize Costs**

Session Chair: Neal Elliott, American Council for an Energy Efficient Economy
St. Tammany Room, 9th Floor

- 1:45-2:15 "Cognitive Energy Value Chain: Leveraging Big Data to Optimize Energy," Graham Bird, Yokogawa Corporation of America, and Tyler Reitmeier, Soteica Visual MESA LLC.
- 2:20-2:50 "Big Data and Efficient Energy Markets," Mark DeSantis, kWantera and Carnegie Mellon University.

Program at-a-glance

Monday, May 19	5:00 pm - 6:30 pm Registration – Parish Hall, 10th floor					
Tuesday, May 20	7:30 am - 5:00 pm Registration – Parish Hall, 10th floor					
8:00 am - 4:30 pm	Energy Managers Workshop – Felician Room, 10th floor					
12:00 noon - 1:00 pm	Energy Managers Workshop Lunch – St. Landry Room, 9th Floor					
Wednesday, May 22	7:00 am - 5:00 pm Registration – Parish Hall, 10th floor					
	7:00 am - 8:00 am Breakfast for All Attendees – Parish Hall, 10th floor					
	7:15 am - 8:00 am Breakfast Meeting for All Authors and Session Chairs – Felician Room, 10th floor					
7:00 am - 5:00 pm	Exhibits – Parish Hall, 10th floor					
Plenary 8:00 am - 9:05 am	Opening Welcome – Louisiana Ballroom, 10th floor					
	American Chemistry Council Recognition of Energy Awards – Louisiana Ballroom, 10th floor					
	Keynote Speaker: Nick Jones, Exxon Mobil Corporate Strategic Planning – Louisiana Ballroom, 10th floor					
		LaFourche Room 9th Floor	Pointe Coupee Room 9th Floor	St. Landry Room 9th Floor	St. Tammany Room 9th Floor	Terrebonne Room 9th Floor
Sessions 1 - 4 9:15 am - 11:50 am Coffee break & Exhibits 10:20 am - 10:45 am Parish Hall, 10th floor	Technical Sessions	1 – American Chemistry Council Energy Award Winners 1	2 – Bass Connections Program in Industrial Energy Efficiency	3 – Energy: Getting the Big Picture	4 – Equipment Analysis and Related Issues	5 – Superior Energy Performance
12:00 noon - 1:30 pm	IETC Luncheon – Keynote Speaker: Helmut Ludwig, Siemens Industry Sector USA – Louisiana Ballroom, 10th floor					
		LaFourche Room 9th Floor	Pointe Coupee Room 9th Floor	St. Landry Room 9th Floor	St. Tammany Room 9th Floor	Terrebonne Room 9th Floor
Sessions 5 - 8 1:45 pm - 5:00 pm Coffee break & Exhibits 2:50 pm - 3:15 pm Parish Hall, 10th floor	Technical Sessions	6 – American Chemistry Council Award Winners 2	7 – The Energy/Water Nexus in the Process Industries	8 – International Industrial Energy Conservation Efforts	9 – Equipment Analysis	5 – Superior Energy Performance
5:30 pm - 7:00 pm	Welcome Reception sponsored by Champion Energy Services – Piazza D'Italia outdoors <i>- Parish Hall, 10th floor if inclement weather</i>					
Thursday, May 22	7:00 am - 11:00 am Registration – Parish Hall, 10th floor					
		Felician Room 10th Floor	Terrebonne Room 9th Floor	St. Landry Room 9th Floor	St. Tammany Room 9th Floor	
Sessions 11 - 14: 8:30 am - 11:55 am Coffee break & Exhibits: 9:35 am - 10:15 am Parish Hall, 10th floor	Technical Sessions	11 – American Chemistry Council Award Winners 3	12 – Offshore Energy Generation from Wave Energy	13 – Pneumatic Systems Energy Usage	14 – Corporate Energy Programs that Produce Results	
12:00 pm - 1:30 pm	IETC Energy Awards Luncheon – Speakers from IETC Energy Award Winners – Louisiana Ballroom, 10th floor					
		Felician Room 10th Floor	Terrebonne Room 9th Floor	St. Tammany Room 9th Floor		
Sessions 15 - 17: 1:45 pm - 3:25 pm Coffee break: 2:50 pm - 4:00 pm Parish Hall, 10th floor	Technical Sessions	15 – Texas A&M University Energy Research and Analysis	16 – Energy Usage Analysis on a National Scale	17 – Using 'Big Data' to Minimize Costs		
Friday, May 23	Post Conference Workshops					
	7:00 am - 8:00 am Breakfast – Felician, 10th floor					
8:00 am - 2:00 pm	Business Case Bootcamp for Energy Managers Workshop – West Felician Room, 10th floor Steam Best Practices Workshop – East Felician Room, 10th floor Lunch – Parish Hall, 10th floor					

Keynote Speaker Wednesday Morning, May 21



Mr. E. Nick Jones, Energy Advisor, Exxon Mobil Corporate Strategic Planning Department
"The Outlook for Energy – A View to 2040"

Nick Jones is an Energy Advisor in ExxonMobil's Corporate Strategic Planning Department.

In this capacity, he is responsible for assessing economic and energy trends, emerging energy technologies, and related market and public policy issues around the world. He is a principal contributor to ExxonMobil's long-term global energy outlook, including the identification of potential implications for energy markets and the Corporation's strategic plans. He is also active in communicating ExxonMobil's view of the energy future to a wide variety of audiences.

Nick has worked for ExxonMobil since 2001 in a variety of technical and management positions. He holds a B.S. in Chemical Engineering from the University of South Carolina and a Ph.D. in Chemical Engineering from Purdue University.

Keynote Speaker Wednesday Luncheon, May 21



Dr. Helmuth Ludwig, Chief Executive Officer, Siemens Industry Sector North America
"Manufacturing More Competitively in America"

As Chief Executive Officer of the Industry Sector in the U.S., Helmuth Ludwig is responsible for all business activity and executive management of the Siemens Industry Sector business in the United States. In his more than 20 years with Siemens, Helmuth has held a broad range of strategic leadership positions.

He joined Siemens in 1990, working in corporate strategy developing regional business plans. After serving as general manager of Siemens' first organization in Kazakhstan, he joined the Automation and Drives group where he was responsible for process automation systems in Karlsruhe, Germany. He then became head of Siemens Energy and Industry division in Buenos Aires. Later, he became president of the Systems and Software House within the Automation and Drives headquarters in Nuremberg, Germany.

Helmuth then moved to the Systems Engineering Business Unit as president before being appointed president of Siemens PLM Software, a business acquired by Siemens in 2007 and headquartered in Plano, Texas. In that role, he successfully led the organization's integration into Siemens with its 50 legal entities and multiple facilities in 26 countries while working with its management team to develop long-term strategic direction. In 2010, Helmuth became responsible for the global communications activities of the Industry Sector's Industry Automation division. He took over as CEO for the Industry Sector in North America in October 2011.

Helmuth holds a master's degree ("Diplom") in industrial engineering from the University of Karlsruhe, Germany; a Master of Business Administration from the University of Chicago; and a doctorate from the Christian-Albrechts-University in Kiel, Germany. He also teaches as Adjunct Professor for Corporate Strategy at Southern Methodist University's Cox School of Business in Dallas. He is fluent in German, English and Spanish.

Thursday Awards Luncheon Thursday Afternoon, May 22



Dr. R. Neal Elliott, PE
2014 IETC Energy Award Winner

Dr. Neal Elliott's energy efficiency career spans over three decades of outstanding dedication to the field of industrial energy efficiency programs, education, and research at the state and national levels. He is an internationally recognized expert and author on energy efficiency programs and policies, industrial energy policy, combined heat and power, and a highly sought speaker at domestic and international energy conferences.

Since 1993, he has been the Associate Director for Research at the American Council for an Energy-Efficient Economy (ACEEE), one of the leading energy-efficiency advocacy groups in Washington, D.C. He oversaw the establishment of ACEEE's State Clean Energy Resource Project that collects data on state energy efficiency policies, managed the development of ACEEE's annual State Policy Scorecard, and helps prepare state-specific energy efficiency potential and policy assessments. He is also one of the foremost advocates for Combined Heat and Power [CHP] at the national and state levels. Neal is the past president, past board and executive committee member, and past Chair of the Legislative Policy Committee of the U.S. CHP Association. He is frequently asked to testify before Congress and local governments on industrial energy policy and programs.

Prior to joining ACEEE, Elliott was an adjunct associate professor of Civil and Environmental Engineering at Duke University and Senior Engineering Project Manager at the N. C. Alternative Energy Corporation. Elliott has B.S. and M.S. degrees in Mechanical Engineering from North Carolina State University, and a Ph.D. from Duke University in civil and environmental engineering.

Last but not least, he serves generously with his time on the Strategic Advisory Group for the Institute for Industrial Productivity and on the Advisory Board of the Industrial Energy Technology Conference since 1998. He has received numerous energy efficiency awards and is a registered Professional Engineer in North Carolina and holds six U.S. patents.



DuPont Protection Technologies
2014 IETC Energy Award Winner

Process steam condensate is recovered and flashed to generate low pressure steam in this DuPont unit operation. The low pressure condensate formerly was flashed further to an atmospheric flash tank and then that condensate used in the process elsewhere. A compact heat plate and frame heat exchanger was installed to preheat feed using the condensate flow from the low pressure flash tank to the atmospheric flash tank, eliminating the use of injected virgin steam to preheat the feed. In addition to energy savings from injector steam, the preheat via heat exchange lowered the waste water load from this operation by approximately 50%, saving an estimated two million gallons per year. Special mixers were installed that allow for the utilization of the heat recovery equipment under all conditions without severe water hammer. By allowing all condensate to flow through the heat recovery equipment all the time, steam that would have been vented during the bypassed time was productively put through the flash tank and heat recovery equipment.

The approach was innovative for the plant, because they had little experience with welded plate exchangers. In addition, the use of special mixers to eliminate water hammer to allow for maximum utilization of the heat recovery equipment was novel and not normally done. In this case having the ability to mix hot flashing condensate and relatively cold sub cooled condensate was absolutely necessary for the economics of the heat recovery equipment. It also solved a safety issue. The energy savings exceeded the expectations. The feed was able to be heated farther than designed, resulting in greater energy savings. Because of this, more of a volatile component flashed out prior to the unit operation resulting in the plant being able to reduce stripping steam in addition to eliminating injected steam.

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