ACEEE

American Council for an Energy-Efficient Economy

Intelligent Efficiency Conference

Hilton Austin • Austin, Texas • December 4 – 6, 2016

PROGRAM (*subject to change*)

Sunday, December 4

4:00 pm – 7:00 pm	REGISTRATION OPEN

5:00 pm – 7:00 pm	RECEPTION

Monday, December 5

7:00 am – 7:00 pm	REGISTRATION OPEN

7:30 am – 8:30 am	NETWORKING BREAKFAST

8:30 am – 10:00 am	WELCOME, INTRODUCTIONS & KEYNOTE

Welcome and Introductions: **Steve Nadel**, Executive Director, American Council for an Energy-Efficient Economy
Ethan Rogers, Industry Program Director, American Council for an Energy-Efficient Economy

Keynote Address: **Using Information and Communications Technologies to Advance Global Causes**

James L. Connaughton, President and CEO, Nautilus Data Technologies

10:00 am – 10:30 am	NETWORKING BREAK

10:30 am – 12:00 pm	PLENARY SESSION

Intelligent Efficiency Policy Insights

Moderator: **Maggie Molina,** Utilities, State, and Local Policy Director, American Council for an Energy-Efficient Economy

Speakers: **Robert King**, CEO, South-central Partnership for Energy Efficiency as a Resource
Lena Hansen, Managing Director, Rocky Mountain Institute

Jeff Harris, Chief Transformation Officer, Northeast Energy Efficiency Alliance

This panel will discuss pressing policy issues affecting opportunities for intelligent efficiency, such as distributed energy resource planning and grid integration, evaluation, measurement and verification (EM&V), utility rate design and access to energy data, as well as policies affecting smart buildings and smart cities. Panelists will also share insights on how the recent election results may affect the policy landscape.

12:00 pm – 1:30 pm	LUNCH & PANEL DISCUSSION

Research on Intelligent Efficiency at University Energy Centers in Texas

Moderator: **Ethan Rogers,** Industry Program Director, American Council for an Energy-Efficient Economy

Panelists: **Juan Gomez**, Interim Center Director, University of Texas, San Antonio, Sustainable Energy Institute
Dean Schneider, Director for Manufacturing Operations, Texas A&M University, Engineering Experiment Station
Brewster McCraken, President and CEO, Pecan Street, Inc.
Dave Claridge, Director of Energy System Laboratory, Texas A&M University, Engineering Experiment Station

Texas is one of the nation's epicenters of energy efficiency research, and much of that work takes place at university-based centers. Each center director will give a brief overview of his center's work and its impact in the field. The directors will discuss how they partner with organizations in the private sector.

1:30 pm – 3:00 pm	BREAKOUT SESSIONS

Track A: Integrating Distributed Resources

1A Enabling the Virtual Power Plant

Moderators: **Marc Collins**, DNV GL
Raymond Kaiser, Amzur Technologies

Speakers: **Conrad Eustis**, Portland General Electric Company
Matthew Bye, Trane (Ingersoll Rand)
Andrew Machado, Cadmus

New software and hardware tools can enable real-time monitoring and load control of Distributed Energy Resources (DER). The tight integration between buildings and the grid can create "virtual power plants" that can accommodate the uncertainty of variable energy resources. ICT provides a cost-effective means to improve energy efficiency, provide critical grid services, and reduce the resources necessary to ensure grid reliability as well as resiliency.

Track B: Deployment of ICT in Energy Efficiency Programs

1B The Opportunities and Realities of Home Energy Management Systems

Moderator: **Claire Miziolek,** Northeast Energy Efficiency Partnerships

Speakers: **Kari Binley,** Pacific Gas & Electric Company

Claire Miziolek, Northeast Energy Efficiency Partnerships
Bryan Urban, Fraunhofer Center for Sustainable Energy Systems

This session will showcase a variety of smart home technologies, programs, and approaches. We will discuss the savings potential of new technologies, util
ity efforts and efficiency programs, as well as short and long term approaches for products and systems. We'll explore how their potential compares to reality so participants have a better understanding of smart home opportunities.

Track C: Emerging Opportunities to Better Manage and Measure Data

1C How Good and Big is ICT-Enabled EM&V Going to Be?

Moderator: **Pierre van der Merwe**, Vermont Energy Investment Corporation

Speakers: **Chris Baker,** Arizona Public Service

Tim Guiterman, EnergySavvy
Ethan Goldman, Vermont Energy Investment Corporation

Emerging, automated software is opening up new directions in data analytics, and turning many forms of energy use data into easily verified savings. This session explores attributes of market-ready, proprietary data analytics tools as well as open-source tools. We examine the current landscape and use of data analytics software, nationwide.

Track D: Connecting Disparate Dots with ICT

1D Topical Discussion Group

(See program addendum for description)

3:00 pm – 3:30 pm	NETWORKING BREAK

3:30 pm – 5:00 pm	BREAKOUT SESSIONS

Track A: Integrating Distributed Resources

2A Unlocking Near-Term Load Potential with ICT

Moderators: **Raymond Kaiser,** Amzur Technologies
Marc Collins, DNV GL

Speakers: **Charlie Richardson**, Franklin Energy Services
Claire Miziolek, Northeast Energy Efficiency Partnerships
Teja Kuruganti, Oak Ridge National Laboratory

Smart thermostats have been seen as the "killer app" for accelerating the development of virtual power plants because of their low cost and the significance of heating and cooling loads. Despite their compelling advantages and simplicity, large-scale roll-outs are still rare. This panel will identify market gaps and outline an open-source approach to unlock the potential for real-time thermal management and control.

Track B: Deployment of ICT in Energy Efficiency Programs

2B   Using ICT in C&I Programs

Moderator: **Richard Tonielli,** Commonwealth Edison Company

Speakers: **Tanya Crenshaw**, Cascade Energy
              Stephen Brooks, Bonneville Power Administration
              Virginia Hewitt, SparkFund
              Steve Martin, Cascade Energy

This panel will discuss successful strategic energy management programs. It will look at how they incorporate technology and continuous improvement to help participants prioritize and execute capital projects and operational improvements. In addition, it will explore innovative ways to address complex issues such as the need for financing as well as the impact of energy efficiency measures on demand response strategies.

Track C: Emerging Opportunities to Better Manage and Measure Data

2C   Collection, Analysis and Visualization of Data

Moderator: **Dan Brown**, Cascade Energy

Speakers: **Courtney Weber**, Chicago Bridge & Iron
              Reshma Singh, Lawrence Berkeley National Laboratory
              David Cohen, Center for Sustainable Energy

Software is changing the face of energy efficiency delivery. This panel will share three success stories illustrating its fast-increasing power. We'll cover technology that empowers homeowners and motivates them to act. We'll discuss how it streamlines the selection and implementation of energy information solutions, and how it expedites the creation and use of interactive mapping to optimize city-wide infrastructure.

Track D: Connecting Disparate Dots with ICT

2D   Integrating Electric, Gas, and Water Utility Goals

Moderator: **Claude Godin**, DNV GL

Speakers: **Jamie Peters,** EnergySavvy
              Robb Barnitt, Dropcountr
              Jeff Perkins, ERS, Inc.

Electric, natural gas, and water utilities are investing in communication networks that operate in isolation from each other even though they may exist in parallel. They may also share similar goals such as lower operating costs, economic development, and local environmental protection. This panel will discuss examples and methods of collaboration between utilities. It will explore how technology can facilitate such efforts.

5:15 pm – 5:45 pm	**TRADING SPACE I*** *(see page 7 for description)*	

6:00 pm – 7:30 pm	**WELCOME RECEPTION**

Tuesday, December 6

7:00 am – 4:00 pm   **REGISTRATION OPEN**

7:30 am – 8:30 am   **NETWORKING BREAKFAST**

8:30 am – 10:00 am   **PLENARY SESSION**

Intelligent Efficiency – It's Different in Texas

Moderator: **Alison Silverstein**, Alison Silverstein Consulting

Speakers: **Kenan Ogelman**, Electric Reliability Council of Texas
              Tim Carter, MP2 Energy
              Suzanne Bertin, Texas Advance Energy Business Alliance

The panel will discuss how intelligent efficiency and advanced energy technologies fit together in Texas. It will look at how the state's market and tech implementation differ from other areas, and how intelligent efficiency can serve its energy customers and market, today and in the future.

10:00 am – 10:30 am   **NETWORKING BREAK**

10:30 AM – 12:00 pm   **CONCURRENT SESSIONS**

Concurrent I: Building a Smarter City

Moderator: **Alexandria McBride**, ITI

Speakers: **Representative from the City of Columbus, Ohio**
              Karl Popham, Austin Energy
              Anna J. Siefken, Carnegie Mellon University
              Josh Sperling, National Renewable Energy Laboratory

The implementation of intelligent efficiency by government is mostly happening at the local level where stakeholders can leverage ICT for greater efficacy and efficiency. This panel will discuss the experiences of Austin, Columbus, and Pittsburgh as well as the ways that national leadership has facilitated local action.

Concurrent II: Utilizing Intelligent Efficiency to Achieve Environmental Goals

Moderator: **Carmen Henrikson**, TRC

Speakers: **Marina Badoian-Kriticos,** Institute for Market Transformation
              Brad Davis, NEST
              Scott McClintock, FirstFuel
              Alok Singh, Southern California Edison

Many organizations are looking to energy efficiency to meet their environmental goals. Intelligent efficiency offers new tools to achieve such results and to capture performance more effectively. In this panel, representatives from local government, the private sector, and utilities will discuss their experiences in leveraging ICT to meet multiple and often overlapping organizational goals.

12:00 pm – 1:30 pm	NETWORKING LUNCH

1:30 pm – 3:00 pm	BREAKOUT SESSIONS

Track A: Integrating Distributed Resources

3A Integrating Nanogrids and Micogrids into the Modern Grid

Moderators: **Raymont Kaiser**, Amzur Technologies
Marc Collins, DNV GL

Speakers: **Michael Starke***,* Oak Ridge National Laboratory
Lisa Martin, Austin Energy
Kurt Roth, Fraunhofer Center for Sustainable Energy Systems

The sharp decline in solar PV costs and the significant growth of energy storage systems has set the foundation for a fundamentally new power generation and distribution model. This panel will assess how nanogrids and microgrids can move into the mainstream, and how these distributed platforms can be integrated with the Modern Grid.

Track B: Deployment of ICT in Energy Efficiency Programs

3B Breaking Down Silos with Residential Tech

Moderator: **Jamie Peters,** EnergySavvy

Speakers: **Claude Godin**, DNV GL
Garry Jones, Oncor Electric Delivery Company
Jamie Howland, Acadia Center

As energy efficiency programs become more complex and utilities seek to quantify the results, the program administrators increasingly need to develop and deliver programs that tie EE to demand response, AMI infrastructure, and even water. Yet these initiatives have historically been tracked and delivered separately. This panel will discuss new technologies and tactics to break down these silos to the benefit of both customers and utilities.

Track C: Emerging Opportunities to Better Manage and Measure Data

3C Emerging Technologies

Moderator: **Andrew Machado***,* Cadmus

Speakers: **Jasmine Rivest**, Efficiency Vermont
Trevor Terrill, Texas A&M University
Michael Serour, Verdant

Data are the lifeblood of intelligent efficiency. Energy efficiency experts continue to leverage emerging technologies and find new applications for existing ones. Home automation devices are a growing source of data. They offer insight into residential energy-savings opportunities. The hospitality sector is applying new software and algorithms to save energy without sacrificing comfort and to collect business intelligence data. For industrial sites, which are generally among the heaviest energy users, compressed air systems represent a major opportunity for efficiency. Machine learning is an emerging strategy for these systems, and it can scale to motors, chillers, and boilers. This panel will discuss the use-cases for emerging technology in various sectors and the data that flow through them.

Track D: Connecting Disparate Dots with ICT

3D New Approaches to ICT Protocols and Policies

Moderator: **Andrew Stryker**, DNV GL

Speakers: **Stephen Harper,** Intel
               Roseline Oweseeni, Apogee Consultants
               Brad Jones, Cadmus

Intelligent efficiency isn't just changing how we save energy. It is also changing how we bring product solutions to market, how we engage end users, and how we assess and document energy savings. This panel will feature presentations on how emerging technologies have gone from the workbench to the field, how IT has engaged people across the globe, and how a new initiative is seeking to make system-level energy savings more available to energy efficiency programs.

3:00 pm – 3:30 pm	NETWORKING BREAK

3:30 pm – 5:00 pm	TRADING SPACE II*

Description: In these sessions, we deviate from our usual format. Attendees will be offered a few minutes to present information on their research, new product or service, or initative and ask for data, assistance, participation, or funding. The objective of Trading Space is to facilitie connections that lead to new research, products, services, projects, and collaborative endeavors. Depending on the volume of interest, there will be one or two sessions. The earleist registrants will have the option of presenting on the first day.

5:00 pm	CONFERENCE ADJOURNS

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