



# TEXAS

GULF COAST REGION

## 8th Annual USGBC Texas Energy Summit

Presented by the Texas Gulf Coast Region

**Thursday, October 11, 2018**

Norris Conference Center at City Centre

Event Program sponsored by

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## Letter from Jonathan Kraatz



Thank you for attending the 2018 USGBC Texas Energy Summit. I welcome you on behalf of the members of the USGBC Texas Chapter.

This year's Energy Summit Committee has put together a great range of tracks and sessions covering vastly different projects and technologies to generate new ideas and discussion. Our Chapter Mission is to transform the way commercial buildings, homes and communities are designed, built, maintained, and operated in Texas. And we are making progress!

Using USGBC's LEED rating system as a measuring stick, we are approaching 500 Million square feet of certified space placing the "country" of Texas in the Top 5 Internationally for certifications. And specifically relevant to existing facilities, recent certifications using the Operations and Maintenance rating system have surpassed the square footage for new construction. Thank you for helping us achieve this bold vision.

***Jonathan Kraatz, USGBC Texas, Executive Director***

## Letter from Keith Reihl



Welcome to the 8th Annual USGBC Energy Summit presented by the Texas Gulf Coast Region. We are excited to provide this year's incredible lineup of speakers and have many ideas to share. The goal of the conference is to educate you on what energy efficiency measures can be done, introduce you to resources and of course provide a forum to discuss ideas with your colleagues. Our theme this year is *Control Your Building*. It's not only about controls but rather getting control of your utility use.

Our topics cover: leading edge technology on energy efficiency, energy efficiency resources; retro-commissioning; how to pay for energy efficiency upgrades; optimized operations and best practices that many of the biggest projects in the region are utilizing to operate complex facilities for half the energy and case studies with people that have done it.

Aside from that, we just want to have some fun learning together. Therefore, it seems most appropriate to end the day with spirits and bites while the freeways around us decongest from the rush hour traffic. Please enjoy the program today, and stay around for the networking session afterwards. We'd love to get to know our Energy Efficiency hero community better, and there's no better time to do it!

***Keith Reihl, Energy Summit Committee Chair***

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## 8:30 AM to 9:40 AM BREAKFAST KEYNOTE SPEAKER

**Philip B. Bedient**  
**Herman Brown Professor of Engineering**  
**Civil and Environmental Engineering**  
**Director, SSPEED Center**  
**Rice University**

Dr. Philip B. Bedient is also Herman Brown Professor of Engineering in the Department of Civil and Environmental Engineering at Rice University. He teaches and performs research in surface and ground water hydrology, disaster management, and flood prediction systems. He served as Chair of Environmental Engineering from 1992 to 1999. He has directed 60 research projects over the past 42 years, has written over 180 articles in journals and conference proceedings. He is lead author on a text on "Hydrology and Floodplain Analysis" (Prentice Hall, 6th ed., 2018) used in over 75 universities across the U.S. Dr. Bedient received the Herman Brown endowed Chair of Engineering in 2002 at Rice University. He was elected to Fellow ASCE in 2006 and received the C.V. Theis Award from the American Institute of Hydrology in 2007.

He is the director of the Severe Storm Prediction Center (SSPEED) at Rice University (since

Hurricane Ike in 2008) consisting of a team of seven universities and 15 investigators from Gulf coast universities dedicated to improving storm prediction, education, and evacuation from disaster.

Dr. Bedient has extensive experience working on flood and flood prediction problems in the U.S. He developed one of the first radar based rainfall flood alert systems (FAS-4) in the U.S. for the Texas Medical Center. He has evaluated flood issues in Texas, California, Florida, Louisiana, and Tennessee since 1990. He has worked on some of the largest and most devastating floods to hit the U.S. including T.S. Allison in 2001, Hurricane Katrina in 2005, Hurricane Ike in 2008, from which he formed the SSPEED Center. He is currently involved in the analyzing three major floods in Houston, 2015, 2016, and Harvey in 2017. He is currently working on seven projects related to impacts and future mitigation from Hurricane Harvey.

## BREAKFAST PRESENTATION

### **Green Building and Green Infrastructure for Long Term Flood Mitigation**

With a long history of studying flood problems in the Houston region, it is clear that a variety of green building and infrastructure practices need to be greatly expanded as we go forward from Harvey. Houston should accelerate the initiation, development and implementation of market-based green building policies, program technologies, design practices, and operational procedures.

Green Infrastructure provides amazing opportunities for storing urban runoff, where peak flows increases as we develop a natural area.

My experiences in helping to design the Woodlands and numerous other detention storage projects around the region, and given the tragic experiences in Brays Bayou over the years, green practices in urban settings are vital. These design practices will be reviewed at the local, watershed, and regional level to demonstrate the relative benefits for flood mitigation. Some examples from Ft. Bend County and Clear Lake will also be shown.

## 9:50 AM to 10:40 AM

### CASE STUDIES TRACK



#### **ENERGY EFFICIENCY RESOURCES**

**Presented by Jason Vandever, SPEER**

We will look at some of the resources available for building managers, designers, contractors and others to use and to help increase energy efficiency in their buildings. Also specific products, building components and systems as well as technologies will be discussed. Overviews of a few particular products, buildings systems and components will be given and participants will learn about their uses and applications.

### TECHNOLOGY TRACK



#### **THE IMPACT OF ADVANCED LIGHTING CONTROLS**

**Presented by Rahul Shira, Signify (Phillips Lighting) representing Voss Lighting**

Discuss the fundamentals of control for LED lighting, including how codes affect controls, how LED's are dimmed, occupancy and daylight controls, and the basic structure of networked control system. Look at three aspects of advanced controls: energy-saving controls using wireless, luminaire-integrated technology, connected lighting and its development as a digital infrastructure.

### OPTIMIZED OPERATIONS TRACK



#### **EVALUATING FACILITY MANAGEMENT CORE-COMPETENCIES AGAINST EMERGING TECHNOLOGIES AND EXPECTATIONS**

**Presented by David MacLean, McMac Commissioning Services**

Building Owners and Facility Managers face daily bombardment by companies touting emerging technologies such as Cloud-Based Services (data analytics, auditing), the Internet of Things (IoT), Artificial Intelligence, etc. This session will give participants the tools necessary to honestly evaluate their team's core competencies against these emerging technologies and new business drivers. We will examine in detail the technical solutions being proposed against what tasks and expectations your team can realistically be expected to handle internally and what might bring better value and risk abatement when performed by the right partners. No matter where your building is, in its life journey, you will be able to analyze the right fit of tools, partners and services to future proof your business. Join us as David MacLean walks us step-by-step through a complete analysis that might challenge completely the way you think about managing buildings.

### MANAGE YOUR BUILDING TRACK



#### **CHP 101 FOR FACILITY MANAGERS**

**Presented by Gavin Dillingham, DOE CHP TAP**

Calling all building engineers, facility managers and project developers to learn more about how combined heat and power (CHP) can be used to reduce energy costs, reduce emissions and improve a facilities operational resilience. Topics will include an overview of CHP technologies, CHP market trends, CHP application process and how to obtain no-cost CHP support from the Department of Energy Combined Heat and Power Technical Assistance Partnership.

**11:00 AM to 11:50 AM****CASE STUDIES TRACK****FINANCING EFFICIENT CAPITAL IMPROVEMENTS**

**Presented by Rachel Davis, Petros PACE Finance; Seth Eslami, Stellar International Commercial Real Estate and Tim Crockett, PACE Building Efficiency**



A panel of subject matter experts will share what Texas Property Assessed Clean Energy (TX-PACE) is and will discuss examples of how it is lowering operating costs and financing energy efficiency, water conservation, distributed generation, and resiliency upgrades to existing buildings across the state.

**TECHNOLOGY TRACK****CHP TECHNOLOGY TRENDS**

**Presented by Doug Edgar, White Harvest Energy; Gregg Morasca, Schneider Electric; and Michael Langton, Enhanced Professional Services LLC**



Join us for an interactive session and learn about the latest trends in combined heat and power (CHP) technology and applications. New technology developments are growing opportunities for large and smaller-scale applications with CHP as well as micro-CHP systems that are making their way into less traditional CHP applications. This session will also cover the financial and environmental benefits of these technologies.

**OPTIMIZED OPERATIONS TRACK****BUILDING OPERATOR CERTIFICATION: SMART BUILDINGS NEED SMART OPERATORS**

**Presented by Liz John, SPEER**

Did you know most buildings can cut total energy use by 5-30% while fully maintaining or improving both comfort and function? The national Building Operator Certification® (BOC) Program is the leading training and certification program for building engineers and maintenance personnel. BOC graduates make their buildings more comfortable, efficient and environmentally friendly -- thanks to skills they learn and behavioral changes they master throughout the course. This credential is just as valuable to building owners as it is to operators. Its graduates help their organizations substantially cut operating costs by roughly \$10,000 per year/per grad. *Enroll today, save energy and money tomorrow.*

**MANAGE YOUR BUILDING TRACK****HOW TO LEVERAGE INTERVAL DATA**

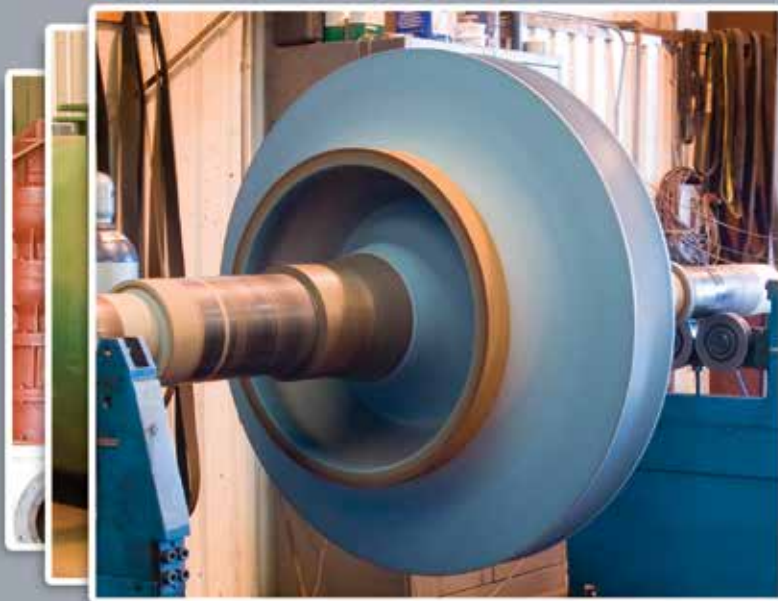
**Presented by Dennis Cruse, BBG Real Estate Services and Jonathan Wilson, Schneider Electric**



In this session you will learn how actions and operations in your building impact: the electricity rate you pay, the delivery charges you incur, and how to leverage 15-minute interval data from your building's utility meter to reduce both the cost and usage of electricity.

**NOTES**

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**NOON to 1:10 PM****LUNCHEON KEYNOTE SPEAKER****Bill Magness****President and Chief Executive Officer  
ERCOT**

Bill Magness joined ERCOT in 2010, and became ERCOT's president and chief executive officer in January 2016. Before becoming CEO, Mr. Magness served as ERCOT's general counsel.

Mr. Magness has been active in the utility business for over 25 years, working with electric and telecommunications companies nationwide. He has held executive management positions in the public and private sectors, and served as lead counsel in numerous state and federal regulatory matters. Early in his career, he served as a federal prosecutor in the U.S. Attorney's office.

Mr. Magness represents the Independent System

Operator/Regional Transmission Organization (ISO/RTO) sector on the North American Electric Reliability Corporation (NERC) Member Representatives Committee, is a member of the Executive Committee of the ISO/RTO Council, and serves on the Advisory Board of the Texas A&M Engineering Experiment Station Smart Grid Center.

Mr. Magness grew up in Orange, Texas, received his bachelor's degree from The University of Texas at Austin, and graduated from the University of Pennsylvania Law School. He and his wife are the parents of two daughters.

**LUNCHEON PRESENTATION****Current Issues and Challenges – ERCOT**

ERCOT manages the flow of electricity for 90 percent of Texas consumers, as well as many aspects of the competitive wholesale and retail electricity markets in Texas. That work involves balancing electric supply and demand in a state that continues to see substantial economic and population growth. Bill Magness will provide an overview of ERCOT's roles in the Texas electricity market, and a look at the rapid changes going on in how electricity is made and consumed – and the key role consumers have in shaping the future of the market.

## 1:30 PM to 2:20 PM

### CASE STUDIES TRACK



#### LARGE CAMPUS ENERGY TRAVEL STORIES PANEL

**Presented by George Kehler, Lone Star College; Mike Mendoza, University of Houston and Kevin McCue, NASA**



Come join us as we travel along with three prominent local large campuses on their sustainability/energy journeys. Leaders from NASA, the University of Houston and Lone Star Community College System will present the current status of their campuses' travels with respect to how they arrived at their current destinations and where they are going. They will map out their strategy on energy, sustainability, third-party verified above-minimum-code rating systems, successes, obstacles, failures, future plans and opportunities. Participants will hear very different travel stories and will be able to glean exciting insight into how large campuses are choosing to approach each new opportunity.

### TECHNOLOGY TRACK



#### ACHIEVING A SUSTAINABLE, ENERGY EFFICIENT BUILDING

**Presented by Kermit Richards, Hunton Services and Seth Eslami, Stellar International Commercial Real Estate**



This session will focus on the seven important components to consider in achieving a sustainable, energy efficient building and will provide a building manager's firsthand account of a successful implementation.

### OPTIMIZED OPERATIONS TRACK



#### CHP AS A SOURCE OF RESILIENCE IN MICROGRIDS

**Presented by Carlos Gamarra, DOE CHP TAP**

This session will introduce the evolving role of combined heat and power (CHP) from energy efficiency markets to power resilience enhancement in traditional power systems and microgrids. Case studies of the most relevant technical and business approaches to resilience enhancement through CHP-based microgrids will be presented, with a focus on existing and new applications as well as financial and environmental paybacks.

### MANAGE YOUR BUILDING TRACK



#### TOOLS TO COST-JUSTIFY SMARTER BUILDINGS

**Presented by Jonathan Spitz, Autocase**

Efficiently create business cases to optimize capital investments and construction. Learn how to:

1. Easily compare multiple design goals or building investment options,
2. Put dollar values on productivity, absenteeism, and health impacts of your building designs/improvements,
3. See how your designs affect tenants, owners and the community, and
4. Achieve at least one LEED point when using this evaluation method.

## 2:40 PM to 3:30 PM

### CASE STUDIES TRACK



#### **CHP BEST PRACTICE CASE STUDIES IN TEXAS**

**Presented by Lynn Crawford and Bryan Bagley with AEI/Affiliated Engineers, Inc. and Keith Reihl, Reihl Engineering**



The session will focus on a deep dive into case studies on successful CHP projects in Texas. Participants will have an opportunity to learn about three of the newest systems in the Gulf Coast Region which include NASA Johnson Space Center, University of Texas Medical Branch in Texas and the Great American Business Products installation. These are three distinct systems that should shed significant light on the variety of CHP opportunities that can be considered in the region.



### TECHNOLOGY TRACK



#### **CHEMICAL-FREE WATER TREATMENT**

**Presented by Rob French with Flow-Tech representing Roessler Equipment**

Join our presentation on Chemical-Free Water Treatment, how it works, and the different technologies currently used in the industry.



#### **ENERGY & OPERATIONS SAVINGS AROUND WATER TREATMENT PROGRAMS**

**Presented by Chris Fanning, U.S. Water**

This short presentation will answer the question, Why do Water Treatment? We will demonstrate the potential energy saving associated with a proper water treatment program.

### OPTIMIZED OPERATIONS TRACK



#### **ENERGY EFFICIENCY INCENTIVES AND SERVICES AVAILABLE TO COMMERCIAL CUSTOMERS OF CENTERPOINT ENERGY**

**Presented by Calvin Burnham, CenterPoint**

CenterPoint Energy provides numerous energy saving opportunities for commercial customers participating in their Energy Efficiency Programs. Opportunities range from cash incentives for the installation of high efficiency equipment (i.e., HVAC, VFDs, LEDs, window film, etc.), to in-depth engineering analysis of a commercial facility to identify low cost/no cost operational improvements.

### MANAGE YOUR BUILDING TRACK

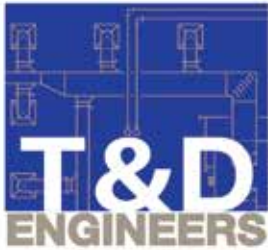


#### **THE HIDDEN COST OF DEFERRED MAINTENANCE**

**Presented by Dan Rivkin, Johnson Controls**

The impact of maintenance issues on a building's energy consumption can reach up to 85% of overall HVAC source energy use. During this presentation, we will discuss how a lack of investment in maintenance can have unintended consequences resulting in additional repair, energy and capital costs. Taking an optimized approach to maintenance can help facility managers avoid the downward spiral of deferred maintenance.

# NOTES



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T & D Engineers has provided quality MEP engineering for more than 10 years. Our project experience includes commercial, corporate interiors, medical, hospitality, retail, educational, religious, institutional, light industrial, and manufacturing. Our focus is design that is sustainable, economic, technically responsible and meets the needs of the project. T & D Engineers is an invaluable addition to your project design team!



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## **BACK TO THE FUTURE PANEL**

### **The Future of Energy Efficiency in our Built Environment – Emerging Drivers and Trends**

The future of Energy Efficiency will be shaped by known, emerging and unforeseen influencers and drivers. Local experts gaze into the future of the healthcare, commercial office, higher education and large campus markets, and share their plans for adapting to these new opportunities.

**3:45 PM to 4:45 PM**

**Followed by Happy Hour**

## **MEET THE PANELISTS**



**Greg Norris**  
Manager, Energy & Utility Programs  
MD Anderson Cancer Center



**Danny Rodriguez**  
VP of Operations  
Transwestern/  
MetroNational



**Kevin McCue**  
Energy and Water Manager  
NASA Johnson Space Center



**Cindy Magouirk, CPM®, RPA®**  
Senior Real Estate Manager  
CBRE



**Mike Mendoza**  
Sustainability Manager  
University of Houston



**MODERATED BY:**  
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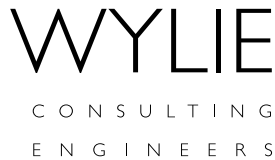


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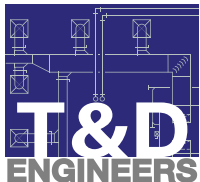
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**4:30 PM  
TO 7:30 PM**  
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industry leaders.

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Thank you to all the sponsors, speakers and volunteers  
who have made this event possible.

**HOPE TO SEE ALL OF YOU IN OCTOBER 2019!**

Any questions, suggestions, or sponsorships - please connect with  
[debra@nbizmarketing.com](mailto:debra@nbizmarketing.com).

*Thank  
You*