



# **modernsolutions** power systems conference

PALMER HOUSE HILTON, CHICAGO, JUNE 6 –8, 2018

# Service—For Our Customers, Industry, and World

WEDNESDAY, JUNE 6, 2018

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8:00–9:00 a.m.  
WELCOMING KEYNOTE

## Service

Dr. Edmund O. Schweitzer, III, President,  
Schweitzer Engineering Laboratories

Service has roots in our psychology, whether we are receiving it or providing it.

Service brings us together and has many dimensions: compassion, empathy, sympathy, camaraderie, family, professionalism, manners, performance, importance, timeliness, value, patriotism, military service, customer service, emergency service, technical service, and electric power service.

My dad referred to our electric power utility as the PS Company—the public-service company. Samuel Insull referred to the industry that he and Edison fathered as Public Service.

Electric power service is fundamental to all aspects of our daily lives today because it is safe, reliable, economical, and always ready to serve us at the flick of a switch and at the speed of light.

Our industry is in business to serve our customers. Or, as Peter Drucker said, “The purpose of a company is to make a customer.” I like that, and we must take it one step further. The purpose of a business is to make a customer happy.

We will be talking about how we might ensure we’re staying true to our service-centered roots so that our businesses, customers, and world advance together.

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9:00–10:30 a.m.  
EXECUTIVE PANEL

## Executive Panel

### Panelists:

- Robert Yeager, President of Power and Water Solutions, Emerson Automation Solutions
- Edward M. Bolen, President and Chief Executive Officer, National Business Aviation Association
- Dr. Mung Chiang, John A. Edwardson Dean of the College of Engineering, Purdue University
- David C. Blowers, President of National Services in Wealth Management, Northern Trust

### Moderator:

Dr. Edmund O. Schweitzer, III, President,  
Schweitzer Engineering Laboratories

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11:00 a.m.–12:00 p.m.  
KEYNOTE

## Keynote

Horst Schulze, Legendary Hotelier Renowned for Creating  
a Culture of Service

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1:00–2:45 p.m.  
PANEL SESSION

## Customer Service—Developing and Maintaining Trust

Good people trying their best to serve others can make mistakes. However, those crucial situations present us with excellent opportunities to learn, to grow, and to care for our customers in ways that strengthen our relationships.

### Highlights:

- Embracing customer service as an obligation
- Valuing human-to-human interactions over business-to-business transactions
- Learning how to operate perfectly with imperfect people
- Maintaining strong partnerships; teamwork is essential when responding to unforeseen events

### Panelists:

- Horst Schulze, Legendary Hotelier Renowned for Creating a Culture of Service
- Dr. Mary Rezac, Dean of the Voiland College of Engineering and Architecture, Washington State University
- David Costello, Chief Sales and Customer Service Officer, Schweitzer Engineering Laboratories

### Moderator:

Travis Mooney, Director of Quality,  
Schweitzer Engineering Laboratories

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3:15–5:00 p.m.  
PANEL SESSION

## Building In Resilience to Prevent Damage

Restoring service after hurricanes, floods, and wildfires has reduced from weeks to days because of our lessons learned, mutual assistance, and improved preparation. Where can we build resilience into our systems that balances well with our restoration efforts?

### Highlights:

- Minimizing damage and expediting service restoration with resilience strategies from industry leaders
- Planning for and working through unexpected events in an emergency
- Making coordination efforts smoother and environments safer with new technologies
- Mitigating disasters through system design modifications

### Panelists:

- Colonel Kirk Bruno, United States Marine Corps (retired)
- Tim Douglas, Automated Rapid Infrastructure Evaluation System (ARIES) Technical Lead and Senior Systems Engineer, Lockheed Martin
- Bob Roy, Director of Major Underground Operations, CenterPoint Energy
- Steve Locke, Senior Vice President and Head of Security Technology and Operations, Northern Trust
- Brad Thress, Senior Vice President of Engineering, Textron Aviation
- Kasia Kulbacka, Vice President of Electric Systems Engineering, National Grid

### Moderator:

Shankar Achanta, Engineering Director, Research and Development,  
Schweitzer Engineering Laboratories

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## THURSDAY, JUNE 7

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8:00–10:00 a.m.

PANEL SESSION

### Modern Solutions for Grid Control

Microgrids deliver reliable, safe, and efficient ways to serve customers. How will today's factors like faster dynamics, decreasing inertia, time-domain protection, and better communications drive network control going forward?

#### Highlights:

- Understanding the importance of fast, simple, reliable, and secure solutions when selecting technology for today's power system
- Modeling and understanding power systems from first principles when considering technical solutions
- Presenting the future of microgrids: where the industry is going and what that means for the rest of the power system
- Discussing practical examples and what it takes to make grid automation work reliably

#### Panelists:

- Erik Limpaecher, Group Leader,  
MIT Lincoln Laboratory
- Dr. Robert H. Lasseter, Emeritus Professor,  
University of Wisconsin-Madison
- Carl Monroe, Executive Vice President and Chief Operating Officer,  
Southwest Power Pool
- Dr. Steven D. Pekarek, Professor of Electrical and Computer Engineering,  
Purdue University
- Dr. Aleksi Paaso, Manager of Emerging Technology,  
Commonwealth Edison

#### Moderator:

Dr. Greg Zweigle, Fellow Engineer, Research and Development,  
Schweitzer Engineering Laboratories

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10:30 a.m.–12:00 p.m.

KEYNOTE

### Keynote

Chris Inglis, Deputy Director,  
National Security Agency (2006–2014)

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1:00–2:45 p.m.

PANEL SESSION

## Inherently Safe Cyber

Cyber needs a fundamental change to realize a future where our communications networks and information systems are inherently safe. Can we take advantage of operational technology applications to solve the problem for the power industry? By posing a hypothetical solution, the panel will discuss engineering a cybersecure power system network.

### Highlights:

- Removing complexity to make a shift towards a more cybersecure world
- Achieving an inherently cybersecure system is easy for industrial control system (ICS) and power utility operational technology networks
- Figuring out what we can do today to engineer cybersecure networks

### Panelists:

- Robert M. Lee, Chief Executive Officer, Dragos, Inc.
- Robert Tafoya, Director of Business Development for Utilities and Advanced Energy, Juniper Networks
- Dr. Nathan Wallace, Director of Cyber Operations, Cybirical, and Staff Engineer, Ampirical
- Annabelle Lee, Chief Cyber Security Specialist, Nevermore Security

### Moderator:

Dr. Ryan Bradetich, Vice President of Automation and Communication, Research and Development, Schweitzer Engineering Laboratories

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3:15–5:00 p.m.

PANEL SESSION

## Valuing Today's Dynamic Mix of Energy Sources

The dynamic mix of distributed energy resources, regulatory policies, and changing technologies adds complexity and costs to the value chain and clouds understanding of the value of energy. In this session, we'll examine the challenges of maintaining system reliability in the wake of new technology adoption, the true levelized cost of energy, and the role standards play when integrating new technology

### Highlights:

- Valuing grid services like voltage and frequency regulation, cold-load pickup, and motor starting current amid the changing landscape
- Analyzing provider compensation
- Defining and conveying the true value of energy amid great transformation

### Panelists:

- David Angell, Senior Manager of Transmission and Distribution Planning, Idaho Power Company
- Dr. Carey W. King, Assistant Director and Research Scientist, The University of Texas at Austin, Energy Institute
- Mark Siira, Director of Utility Compliance and Solutions, ComRent International
- Dr. Ryan Quint, Senior Manager of Advanced Analytics and Modeling, North American Electric Reliability Corporation

### Moderator:

Erin Jessup, Engineering Manager II, Research and Development, Schweitzer Engineering Laboratories

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## FRIDAY, JUNE 8

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8:00–9:30 a.m.

KEYNOTE

### Keynote

Dr. James Merlo, Vice President of Reliability Risk Management,  
North American Electric Reliability Corporation

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10:00 a.m.–12:00 p.m.

PANEL SESSION

### The Optimal Power Grid Composition

Clean, economical, and dependable energy comes from a combination of renewable and conventional energy sources. What are the financial factors that determine an optimal composition? Are we able to control such a power system with present technology? In this session, we'll discuss what technologies we need to invent or develop to maintain a controlled, stable power system.

#### Highlights:

- Determining the optimal mix of renewable and conventional energy sources from utility to utility
- Determining the control and protection challenges associated with a new power system
- Redefining the role of system operators as power systems change

#### Panelists:

- John Moura, Director of Reliability Assessment and System Analysis, North American Reliability Corporation
- J. Charles Smith, Executive Director, Utility Variable-Generation Integration Group
- Clyde Loutan, Principal, Renewable Energy Integration, California ISO
- Dr. Eben Mulder, Chief Nuclear Officer, X-energy

#### Moderator:

Dr. Normann Fischer, Fellow Engineer, Research and Development,  
Schweitzer Engineering Laboratories

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