

POST SHOW REPORT

4TH ANNUAL



CONNECTED PLANT CONFERENCE

Harnessing Digital Tools to Drive Success

2020 Event Highlights



341 REGISTRATIONS



13 COUNTRIES



65 INDUSTRY SPEAKERS



15 CONFERENCE SESSIONS



TOUR OF GE'S M&D CENTER



DIGITAL SHOWCASE – BUILDING
BLOCKS OF A CONNECTED PLANT

50%

of post-event survey respondents are end users - electricity providers or CPI owner/operators.

96.3%

of post-event survey respondents said the quality of the program met or exceeded their expectations.

92.9%

of respondents said the speakers' knowledge of topics was very good or excellent.

96.2%

of respondents said the event was a good investment of their time and money.

100%

of respondents said the networking events met or exceeded their expectations.

Presented by: **POWER**  **CHEMICAL ENGINEERING**

Host Utility
Partner:



Host CPI Partner:



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2020 Advisory Committee

Thank you to the 2020 Advisory Board for their knowledge, expertise and time dedicated to the power generation and chemical process industries.

David Badanes

AES Data Privacy Officer
The AES Corp.

Sydni Credle, Ph.D.

Project Manager and General Engineer
Enabling Technologies & Partnerships
U.S. Dept. of Energy/National Energy
Technology Lab

Pete Davies

VP of Digital Engineering Solutions
Uniper Enerlytics

James Del Rossi

Mobile Hardware Architect
Dow Water & Process Solutions

Lauhael Godinho

Director, Digital IT: Logistics, Controls, PCN
& Operational Systems
Phillips 66

James Goosby

I&C Support General Manager
Southern Company

David Green

Monitoring and Diagnostic Center Analyst Sr.
American Electric Power

Mike Greene

Operational Technology Lead
Nova Scotia Power

Michael Hallgarth

EHS Manager
Flint Hills Resources

Bradley Houk

Senior Engineering Advisor ExxonMobil
Open Process Automation Project Manager
ExxonMobil Corporation

Matthew Peters

Manufacturing Engineer
3M

Jason Pring

Executive, Digital Industrial Solution
Provider
GE Power

Shahrul Rashid

Custodian, Instrument and Control
Petronas

Yves Gorat Stommel

Head of Cognitive Solutions
Evonik Corporation

Gloriana Teh

Sr. Manager for Manufacturing
Process Optimization
Lonza AG

Jon Towslee

Advanced Services Leader, Americas
Industrial Automation, Energy Industries
ABB

Anne-Marie Walters

Industry Marketing Director, Process &
Resources
Bentley Systems Incorporated

Chris Welch

Enterprise Improvement
Tennessee Valley Authority (TVA)

Andrew Wise

Senior Analyst
Delek US Holdings, Inc.

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HOST CPI
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"If they're looking to leverage digital transformation to affect their goals, initiatives, challenges, then they should absolutely be here and be aware of what's going on."

- Frank Naugle, Honeywell

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RESEARCH INSTITUTE



Digitalizing the Industrial Workforce



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An Ecolab Company

DIGITAL SHOWCASE



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CONFERENCE SESSION HIGHLIGHTS

Attendees left with actionable information and strategies to maximize the use of data, analytics, and related technology to drive efficiency improvements, preventative and predictive maintenance programs, and staff safety. This year's conference delivered a unique experience where attendees learned from the brightest minds, tackling this complicated and highly technical world.

GENERAL SESSIONS

Implementation Case Studies: How Digital Technologies Are Affecting Safety

Moderator: Craig Nicholson, *Consultant*, IEM Energy Consultants

Southeastern Utility Speeds Up Grid Modernization Efforts with Drone Data

Tyler Collins, *VP of Energy*, PrecisionHawk

What We Learned So Far From Implementing a Connected Worker Initiative on One of the Biggest Construction Projects in the World

C. Shannon Posey, *VP, Technical Services*, SmartConnect powered by Certified Safety

Maintenance Digitalization: A Connected Workforce Optimizing Workforce Performance during Shutdown, Turnaround, and Outage Execution

Paul Muir, *President and Chief Revenue Officer*, Mobideo

Louis LaBella, *Executive Vice President and President of Refining*, Delek, Delek US

Digital Showcase — Building Blocks of a Connected Plant

Moderated by: Lucian Fogoros, *Co-Founder & Managing Director*, IIoT World

• **Augmented / Virtual Reality** Sponsored By:  ELECTRIC POWER RESEARCH INSTITUTE

• **Condition-Based Maintenance** Sponsored By: 

• **Plant Data Historian and Advanced Pattern Recognition Software** Sponsored By: 

• **Optimization/Analytics** Sponsored By: 

Opening Remarks & Keynote Presentation

Welcome

Georgia PSC Tim G. Echols, *Commissioner*, Georgia Public Service Commission

Editors' Welcome

Scott Jenkins, *Senior Editor*, *Chemical Engineering* magazine

Sonal Patel, *Senior Associate Editor*, *POWER* magazine

Welcome From Hosts

Dr. Mark Berry, *Vice President of Environmental & Natural Resources and Research & Development for SCS*, Southern Company

Benjamin Blanchette, *Sr. Director - Digital Innovation & Transformation*, Georgia-Pacific

Artificial Intelligence - From Hype to Potential

Chris Benson, *Principal Artificial Intelligence Strategist*, Lockheed Martin



Cyber and Physical Risk Mitigation Strategies for Operational Technology

Moderator: Kenneth Ferguson, *Vice President, Nuclear Technology*, Global Nuclear Associates

Panelists: James Goosby, *I&C Support General Manager*, Southern Company

David Foose, *Security Program Manager*, Emerson Power & Water Solutions

Shahrul A. Rashid, *Custodian, Instrument and Control*, Petronas

"The people that are attending are aspirational. They looking for that next thing. The reason they are here is to change."

- Chris Benson, *Principal Artificial Intelligence Strategist*, Lockheed Martin

Operational Technology Network Strategies

Chair/Moderator: Lauhael S. Godinho, *Director, Digital IT: Logistics, Controls, PCN & Operational Systems*, Phillips 66

Panelists: Juan Panama, *Global Business Development Manager*, Emerson

Benjamin Blanchette, *Sr. Director - Digital Innovation & Transformation*, Georgia-Pacific

Bradley G. Houk, *PE, Senior Engineering Advisor*, ExxonMobil Open Process Automation Project Manager, ExxonMobil Corporation

GENERAL SESSIONS

Time is Money — Digitizing the Outage

Chair: Jason Pring, *Executive, Digital Industrial Solution Provider, GE Power*

Co-Chairs: Matthew Peters, *Manufacturing Engineer, 3M*

James Del Rossi, *Mobile Hardware Architect, Dow Water & Process Solutions*

The Advantages of Wireless Condition Monitoring Over Route-Based Monitoring for Developing a Successful Predictive Maintenance Strategy

Ares Panagoulas, *Sales & Engineering Manager- Wireless Condition Monitoring, Test Lab Manager, Hydro Inc.*

Using Technology to Enhance Plant Electrical Safety and Maintenance Operations: A Reliability Topic

Bhanu Srilla, *Director of Product Marketing, Grace Engineered Products Inc.*

Digitalizing Substation Upgrades – Saving Time and Money

Anne-Marie Walters, *Industry Marketing Director, process & Resources, Bentley Systems Inc.*



"We are all trying to solve some of the same problems. There's no better way to learn than from your peers."

- Ben Blanchette, Georgia-Pacific, LLC/Honeywell

Improving Operation Conditions Through Technology

Chair/Moderator: Jon Towslee, *Advanced Services Leader, Americas Industrial Automation, Energy Industries (IAEN), ABB*

Leveraging Digital Solutions to Increase Operator Effectiveness and Plant Performance

Tom Cross, *Account Manager Power and Water Automation, ABB*

Brian Rupper, *Manager EI&C - Plant Services, Wheelabrator Technologies*

Digital Worker and Remote Power Plant Operations for Safer and Cost Effective Plant O&M

Martha Saker, *Product Manager Edge and Remote Operations, GE Digital*

Co-Authors: Wrangler Ferreira, *Sergipe Site Manager - Senior Customer Service Management Staff Manager, GE Power Digital*

Chetan Chauhan, *General Manager Global Operations & Maintenance, GE Gas Power Systems*

Role of Process Controls and Automation in Plant Digitization

Steven Seachman, *Principal Technical Leader, Electric Power Research Institute*

3 Essential Elements to Realizing Value: The Business of Digitization with Competitive Power Ventures

Joe Michienzi, *Vice President, Asset Management, Competitive Power Ventures, Inc. [CPV]*

Co-Authors: Rachel Farr, *Principal Digital Product Manager, GE Power Digital*

Dave Magill, *Senior Vice President, Asset Management, Competitive Power Ventures, Inc. [CPV]*



GENERAL SESSIONS

Leveraging Equipment Hierarchy Across Platforms

Moderator: **Mike Greene**, *Operational Technology Lead*, Nova Scotia Power

Large Scale Deployment TVA Case Study

David Tiffany, *Engineer*, Tennessee Valley Authority

Co-Authors: **John Cox**, *Principal Analytics Engineer*, Seeq Corporation

Ben Bassford, *Senior Manager Performance Monitoring and Diagnostics*, Tennessee Valley Authority

End-to-end Digital Engagement/ From Value Estimation to Adoption to Value Realization

Jacqueline Grunwald, *CIO*, AdvanSix Inc.

Co-Authors: **Stephen Keefe**, *Strategic Account Manager*, GE Digital

Jared Hartness, *Sr. Product Marketing Manager*, GE Digital

Chemical Plant Instrumentation IOT and Industry 4.0 — the last 12 months and the future

Michael Magerstädt, *Manager, Global Industry Division Chemical*, KROHNE AG

Breaking Out of the Research Lab — AI Technology Has Arrived in Daily Operations

Co-Chair: **Dr. Yves Gorat Stommel**, *Head of Cognitive Solutions*, Evonik Corporation

Leveraging Explainable Machine Learning to Drive Plant Optimization

Dr. Berk Birand, *CEO*, Fero Labs

Why Breakthroughs in Scaled Asset-Centric Modeling Are Critical for the Connected Plant

Javier Martinez Sanchez, *O&M Supervision Director*, Mitsui & Co. (U.S.A.)

Co-Author: **Slavek Zaremba**, *Chief Technology Officer of Predictive Maintenance*, SparkCognition

The Importance of Good Data Science in Effective Asset Performance Monitoring

Ben Berwick, *Strategic Marketing Specialist*, Honeywell Connected Plant

"The content has been great. It really shows where the energy sector is heading."

- **Carlos Sua**, *Senior Developer*, NextEra Energy, 2020 Game Changer Award Winner



Digital Horizon: Emerging Technologies That You Need to Track

Chair/Moderator: **Sydni Credle, Ph.D.**, *Project Manager and General Engineer Enabling Technologies & Partnerships*, U.S. Dept. of Energy/National Energy Technology Lab

Co-Chair: **Chris Welch**, *Enterprise Improvement*, Tennessee Valley Authority (TVA)

The Growth of Blockchain

Hannah Davis, *Blockchain Project Lead*, Electric Power Research Institute

Increase Efficiency in Power Generation with Artificial Intelligence That Encodes Human Knowledge, Expertise, and Experience

Kim Gilbert Ph.D., *Director of Technical Commercial Engineering*, Beyond Limits

Next Generation Operations using Smart Data Analytics **Brian D. Wolf**, *Lead Performance & Optimization Consultant*, Black & Veatch



POWER GENERATION TRACK

Digital Transformation Models

Facilitators: *Mike Greene, Operational Technology Lead, Nova Scotia Power*
Michael Reid PhD, General Manager of Technical Programs, Duke Energy

"The 2020 Connected Plant Conference delivered what we expected and more. We traded ideas with a host of attendees, from experts in artificial intelligence, leaders of Digital Transformation at both Power and Chemical companies, to founders of promising startups. Everyone was laser-focused on solving big problems that will provide the highest return on investment through digitalization."

-Karonn Blue, Managing Principal, L.L. Blue Engineering



Digital Solutions in the Power Plant

Chair/Moderator: *Michael Hallgarth, EHS Manager, Flint Hills Resources*

Hybrid Analytics Solution to Improve Coal Power Plant Operations
Scott Affelt, President, XMPLR Energy LLC

IIoT Digital Twin: Self-Optimizing Combustion System
Sandy Boulssa, Advanced Services Specialist, ABB

Leveraging Digital Technologies to Achieve Global Fleetwide Performance Improvements

Ramiro Rivera, Asset Performance Sr. Manager, Global Operations Support, AES Puerto Rico

Overview of Digital Demonstration Facility (DDF) at Plant Barry
Chet Acharya, Research and Development (R&D): Birmingham, Southern Company Services

"A lot of the right people are here, whether it be suppliers or customers."

- Frank Naugle, Honeywell



CHEMICAL ENGINEERING TRACK

Leveraging Data Analytics for Production Improvement

Facilitators: *Dr. Yves Gorat Stommel, Head of Cognitive Solutions, Evonik Corporation*

Matthew Peters, Manufacturing Engineer, 3M

"There's some really good technical conversations and there's some really good philosophical conversations - how people drove change, how they manage change, how they got other people to start changing direction of path and purpose."

- Ben Blanchette, Georgia-Pacific, LLC

Using Analytics to Advance Operation

Chair/Moderator: *Gloriana Teh, Sr. Manager for Manufacturing Process Optimization, Lonza AG/Ltd*

Digitalization in Production—How Data Analytics Increases Operational Performance

Sunny Dixit, Data Analytics Engineer, TrendMiner

Achieving Optimal Operating Conditions Through Digitization and Data Analysis

Liwei Huang, Sr. Optimization Engineer, ABB

Open Process Automation - Unlocking Value Generation to the Business

David DeBari, Process Control Engineer, ExxonMobil Corporation

The Convergence of Predictive and Preventative Maintenance

Daniel Parker, Sr. Manager, Product Marketing, GE Power

"The opportunities to learn about the newer technologies and applications as well as make connections are VERY beneficial."

- Matt Buck, Senior Technical Leader, EPRI



"It is always valuable to see where industry peers are, and to gain insight on real-world applications of digital tools that are providing value to the end-user. I thought the focus on user stories was great. The networking is another value, because I am able to talk through specifics on how others are strategizing their digital transformation."

- Matt Peters, 3M Georgia-Pacific, LLC



CONNECTEDPLANT

Game Changers

The honored recipients of this award are individuals and teams, who through modern techniques associated with digitalization, have contributed to innovation, solved a problem, or made improvements. A Game Changer is a champion in the power generation and chemical process industries. Congratulations to the following well-deserved winners!

Please visit <https://2020.connectedplantconference.com/connected-plant-game-changers-program/> for details on the winning projects.

MANUEL LOMBARDERO, AES

ALBERT ROOYAKKERS, BEDROCK AUTOMATION

KIM GILBERT, BEYOND LIMITS

SEIGA TEAM (SEAMLESS EPCOM INTEGRATED GLOBAL ACCESS), EASTMAN CHEMICAL COMPANY

JUAN PANAMA, EMERSON .

JOHN CHOWDHURY, FRISCO GREEN ENERGY

MICHAEL PARRELLA AND MARTIN SHIMKO, G THERM INC.

JARED WITTE, KURARAY AMERICA

TODD SYNOGROUND, ASHLEY WARD, AMY BASCHE AND JEFF FLORA, MISSION SUPPORT ALLIANCE

SAMER ARAFA, JUSTIN WOODARD AND TYLER KRUPA, NATIONAL GRID

CARLOS SUA AND ANNAMALAI LAKSHMANAN, NEXTERA ENERGY RESOURCES, LLC

JAY PANICKER AND PRABHAKAR NELLORE, OPENEGRID

SMART WIRES TEAM

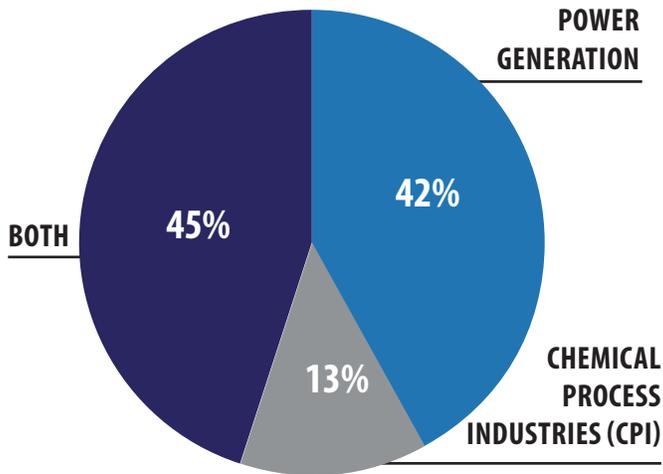
ANDY TANG, WÄRTSILÄ

BENJAMIN BLANCHETTE, GEORGIA-PACIFIC

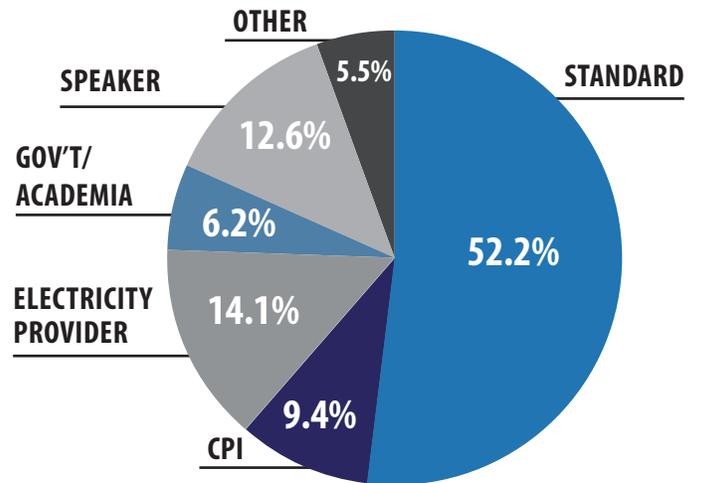


ATTENDEE DEMOGRAPHICS

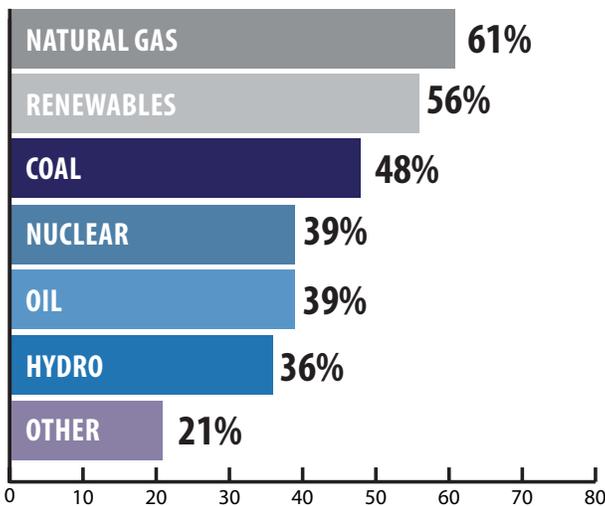
ATTENDANCE BY TRACK



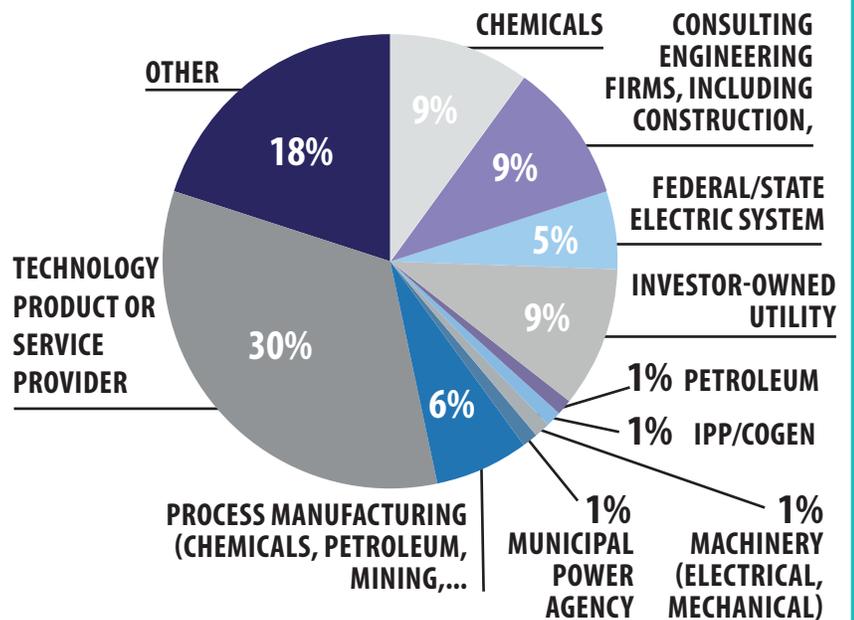
ATTENDEE CATEGORIES



TYPE OF POWER USED (PRODUCERS) OR INTERESTED IN (NON-PRODUCERS)



COMPANY TYPES



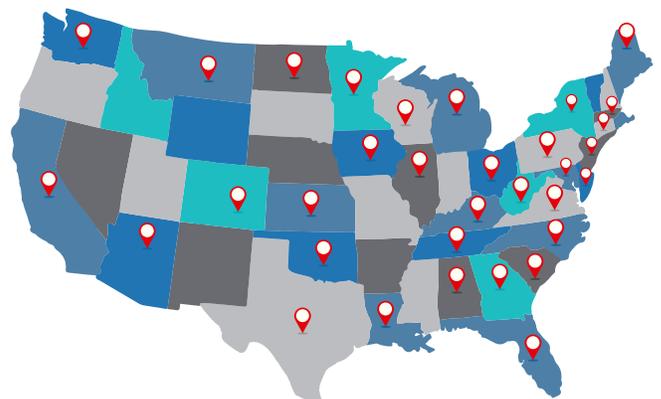
COUNTRIES REPRESENTED

341 ATTENDEES FROM 13 COUNTRIES



STATES REPRESENTED

92% OF ATTENDEES FROM THE U.S. REPRESENTING 33 STATES



ATTENDEES FROM THE FOLLOWING COMPANIES WERE REPRESENTED.

