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Reinhold Environmental**



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Southern
Company*



Coal to Gas Round Table & Expo

Show Guide **2013**

2013 Coal to Gas/PCUG Conference

The Coal to Gas/PCUG Conference is presented by Reinhold Environmental (www.reinholdenvironmental.com)



Sponsored by Southern Company



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Marisa LaPalomoto, Engineer

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Tom Callahan, Managing Supervisor
Roger Ferguson, Env. Controls Specialist

Gulf Power Company
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ESKOM
Ebrahim Patel, Sr. Consultant APC





A Conference That **WORKS**



2014 NO_x-Combustion/PCUG Conference

Renaissance Charlotte Suites, Charlotte, NC

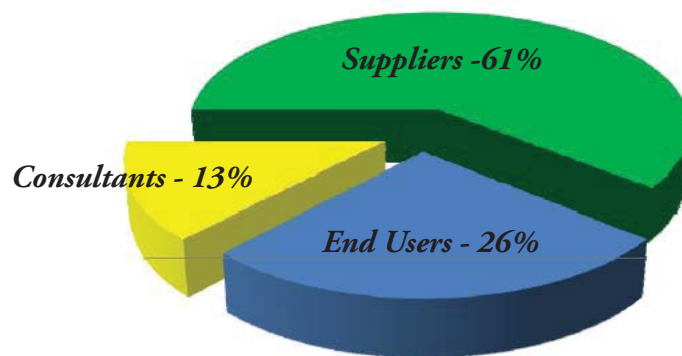
February 10-13, 2014

Hosted by Duke Energy

**Conference Sponsors: Babcock Power, Haldor Topsoe, Hitachi,
Steag Energy Services, URS**

- Networking
- Problem solving
- Technical sessions
- Training
- O&M solutions
- Panel discussions
- PCUG meeting
- Exhibition
- Agenda set by user

2013 NO_x-Combustion / PCUG Conference Attendees



Don't miss out on this unique networking forum!

A high ratio of end users to suppliers, who are involved in open discussions and networking, results in problem solving. Training, technical workshops, panels, open discussion groups and the exhibition provide an exceptional opportunity for attendees to share first hand their experiences and strategies throughout the conference.

February 10-11: Round Table & Expo / February 12-13: PCUG Meeting (end users only)

REGISTER!

EXHIBIT!

SPEAK!



For complete information and registration, go to www.reinholdenvironmental.com
phone: 847-291-7396 email: sreinhold@reinholdenvironmental.com

Coal to Gas/PCUG Conference Agendas

Sponsored by Southern Company

October 29-30, 2013 / Chattanooga Marriott, Chattanooga, TN

Tuesday - October 29, 2013 - Round Table

7:00-8:00	Registration
8:00-8:15	Welcome, Safety Note by Susan Reinhold, Reinhold Environmental
8:15-8:45	Regulatory Update by Kevin White, Southern Company
8:45-9:45	Coal to Gas Conversion - Boiler & Auxiliaries by Kevin Thomas, B&W
9:45-10:15	Break
10:15-11:00	BMS and Combustion Control Considerations by John Bollinger, B&W
11:00-11:45	Impact of Coal to Gas Conversion or Co-Firing on Existing Air Quality Control Systems by Chris Wedig, CB&I
11:45-12:15	Dual Action Catalyst: Removing CO and NOx by Klavs Beldring, Haldor Topsoe
12:15-1:15	Lunch for all attendees
1:15-2:00	Permitting Issues Associated with a Coal to Gas Conversion by Joe Takats, WorleyParsons
2:00-2:45	Practical Implications of NO to NO₂ Catalytic Conversion by William Hizny, BASF
2:45-3:15	Break
3:15-4:00	Gas Accumulation Potential & Leak Detection when Converting to Gas by Rob Mudry, Airflow Sciences
4:00-4:30	Natural Gas Co-Firing / Supplemental Firing by Danny Gelbar, Alstom Power
4:30-5:00	Enhanced Gas Co-Firing with FLGR - Multi-Fuel Flexibility by Cal Lockert, Breen Energy
5:00-6:00	Reception in Expo for all attendees and families

Wednesday - October 30, 2013 - PCUG Meeting (users only)

8:00-8:30	Registration
8:30-9:00	Welcome / Safety Message by Michael Hale, Southern Company
9:00-9:30	Utility Project Discussion I by Michael, Hale, Southern Company
9:30-10:00	Utility Project Discussion II by TVA
10:00-10:30	Break
10:30-11:00	Utility Project Discussion III by Patrick Malone, AEP
11:00-11:30	Utility Project Discussion IV by Jamal Mereb, DTE
11:30-12:00	Utility Project Discussion V by Keith Struckmeyer, Ameren Missouri
12:00-1:00	Lunch for all PCUG
1:00-2:00	The Challenge of Permitting by Julie Robinson, Southern Company
2:00-2:30	Testing Requirements by Bob Wilson, Southern Company
2:30-3:00	Break
3:00-3:30	NFPA Issues with Conversion by Josh Wagner, Southern Company
3:30-4:00	Air Quality Issues by Ed Healy, Southern Company

Coal to Gas Presentations

Tuesday, October 29, 2013 (Plaza Ballroom)

8:00 to 8:15 am

Welcome, Safety Note: by Susan Reinhold, Reinhold Environmental

8:15 to 8:45 am

Regulatory Update by Kevin White, Southern Company

This environmental update will review the future federal regulatory impacts to electric utilities with a focus on coal to gas conversion and co-fire operations.

8:45 to 9:45 am

Coal to Gas Conversion – Boilers & Auxiliaries by Kevin Thomas, Babcock & Wilcox

This presentation will introduce several different approaches for modifying a coal boiler to fire natural gas. Also covered will be boiler and equipment considerations when converting to or adding gas firing.

<<<< BREAK >>>>

10:15-11:00 am

BMS and Combustion Control Considerations by John Bollinger, Babcock & Wilcox

This presentation will cover gas supply configuration and the associated controls and instrumentation to be interfaced to the BMS. Also covered will be combustion control considerations when converting to or adding gas firing.

11:00-11:45 am

Impact of Coal to Gas Conversion or Co-firing on Existing Air Quality Control Systems by Christopher Wedig, CB&I

This presentation provides an overview of the impact of coal to gas conversion (or co-firing) on existing air quality control systems (AQCS) of coal fired power plants. We will address a wide range of AQCS technologies and describe how the firing of natural gas fuel can potentially impact the operation and maintenance (O&M) and disposition of existing AQCS equipment at coal-fired power plants, including changes in flue gas composition/properties and performance of the AQCS equipment due to firing natural gas fuels. Both co-firing and full conversion to natural gas, along with a range of coal fuels, will be described.

11:45-12:15 pm

Dual Action Catalyst: Removing CO and NOx by Klavs Beldring, Haldor Topsøe

This presentation will discuss a new catalyst series which benefits from a dual functionality which makes them active both in CO and VOC oxidation as well as in the SCR reaction.

<<<< LUNCH >>>>

1:15-2:00 pm

Permitting Issues Associated with a Coal to Gas Conversion by Joseph Takats, WorleyParsons

This presentation will address environmental and non-environmental regulatory issues associated with coal-to-gas conversion projects, with particular emphasis on permitting impacts.

2:00-2:45 pm

Practical Implications of NO to NO₂ Catalytic Conversion by William Hizny, BASF

Learn what drives the conversion of NO to NO₂ through an oxidation catalyst and how it may impact coal-to-gas conversions and downstream SCR systems.

<<<< BREAK >>>>

3:15-4:00 pm

Gas Accumulation Potential & Leak Detection when Converting to Gas by Robert Mudry, Airflow Sciences

The safety-related aspects of converting from coal to natural gas are discussed, particularly with respect to natural gas leak detection, ventilation, and safety response planning. A case study will be reviewed for a recent project involving coal-to-gas conversion at a co-generation plant in eastern Tennessee. Discussion will include the engineering analysis and design activities, including ventilation system design, computational fluid dynamics (CFD) modeling of gas leak scenarios, and placement of leak detection devices. operation procedures. This discussion focuses on the fundamentals needed to approach the problem.

Coal to Gas Presentations

Tuesday, October 29, 2013 (Plaza Ballroom)

4:00-4:30 pm

Natural Gas Co-Firing / Supplemental Firing by *Danny Gelbar, Alstom Power*

Using gas for ignition or as a warm-up fuel is one thing, but gas co-firing is an order of magnitude more complex. While a good portion involves direct common sense application, there are design and performance nuances that can be perplexing for tangential fired boilers. This discussion focuses on the performance changes and restrictions based on boilers designed for several different coals while co-fired with natural gas.

4:30-5:00 pm

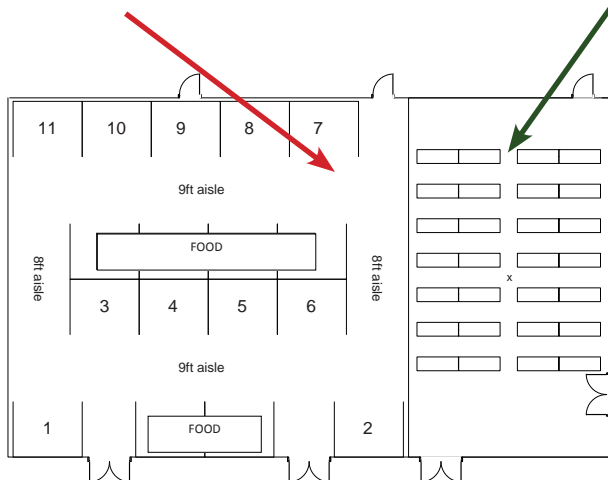
Enhanced Gas Co-Firing with FLGR – Multi-Fuel Flexibility by *Cal Lockert, Breen Energy*

This presentation will cover full scale plant environmental and commercial results derived from cofiring up to 40% natural gas with the plant's traditional coal. Particular attention will be paid to low load reduction improvements, high load NOx improvements, balance of plant impacts and the potential for up to 20% CO₂ reduction.

<<<< RECEPTION IN EXPO >>>>

Exhibition

Technical Sessions



Registration Desk

Booths

Breen Energy Solutions.....	2
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Hitachi Power Systems America.....	9
Combustion Components Associates.....	10

2013 Coal to Gas Round Table Exhibitors

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Alstom is a global leader in power generation, power transmission and rail infrastructure. For over a century, we've set the benchmark for clean, efficient, and flexible generation technology. We supply a full portfolio of new equipment and services to fossil power. Alstom works closely with plant owners to clearly understand their coal fleet objectives, including asset life extension, capacity increase, reliability improvement, emissions reduction or fuel switching. We develop customized, integrated repair, maintenance, and upgrade solutions and plant-wide optimization to realize our customer's business goals.

2013 Coal to Gas Round Table Exhibitors

The Babcock & Wilcox Company.....4

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The Babcock & Wilcox Company (B&W) is an international leader in clean energy technology and services. We offer complete coal-to-gas conversions, regardless of the original equipment manufacturer. Our integrated systems approach includes combustion system and overfire air system modifications; gas fuel train components from the natural gas step-down station to the burners; attemperator, FD fan and pressure part upgrades and adjustments; furnace gas recirculation and other solutions. In addition to equipment supply, we provide a complete range of services including design engineering, manufacturing, project management, start-up and commissioning, and training. Visit www.babcock.com or contact us to learn more.

BASF Corporation.....5

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BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success.

Breen Energy Solutions.....2

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www.BreenES.com



Breen Energy Solutions (BES) provides technologies and solutions to optimize Dry Sorbent Injection Systems to minimize reagent use as well as plant BOP impacts and to meet the strict condensable/filterable PM requirements for Utility-MACT. BES has an installed base of over 100 AbSensor-SO₃ monitors in the industry, the majority of these in closed loop control for SCR/SNCR performance, Heat Rate Improvement, Air heater protection, Blue Plume and Wet/Dry Sorbent injection controls. BES conducts Dry Sorbent Injection demonstrations that deliver a proven closed-loop optimized sorbent injection control system.

Combustion Components Associates, Inc.....10

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Nathan Schindler
Product Manager
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CCA is a global provider of fuel conversion, in-furnace and SCR technologies for reducing NOx, particulate matter, unburned carbon, and CO emissions. CCA's technologies are applied to power plants, paper mills, refineries and industrial facilities. More information is available at www.cca-inc.net.

Hitachi Power Systems America Ltd.....9

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Basking Ridge, NJ 07920
Joseph Brown,
AQCS & AMS Product Manager
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Hitachi Power Systems America, Ltd. (HPSA) is a leading supplier of equipment and services for the Power Generation Market including Thermal, Nuclear and Hydroelectric facilities. Products include advanced Pulverized Coal Boilers and Pressure Parts, Heat Recovery Steam Generators, Steam, Gas, and Hydro Turbines and Generators, Substation Equipment, and Air Quality Control Systems for new plants and retrofit applications. HPSA is Hitachi's Global Center of Excellence for the emissions market including Wet Flue Gas Desulfurization, Enhanced All-Dry Scrubber, Fabric Filters, Mercury Removal Systems, SCR technology, Low NOx Burners and CO₂ mitigation technologies. Services include operation and plant assessments, engineering studies, environmental upgrades and coal- to-gas conversions.

CORMETECH.....6

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Cormetech manufactures and tests engineered catalyst used to reduce emissions from coal and gas-fired power generation, chemical process industries, petroleum refineries, and diesel engines. We are the industry's leading technology solution provider, developing and applying highly reliable and cost effective Selective Catalytic Reduction (SCR) performance with unparalleled customer service. Every day, all over the world, we deliver cleaner air through innovation.

Johnson Matthey Stationary Controls Emissions LLC.....3

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Catalysts

Johnson Matthey pioneered catalyst for the power industry in the 1970's. Since then our catalyst has been installed in some of the most environmentally challenging applications. As the only manufacturer of CO and extruded SCR catalyst for both simple cycle and combined cycle applications, our high activity catalyst delivers outstanding performance with low pressure drop. As a manufacturer of SCR catalyst for coal applications, we have installed over 50,000 m³ of catalyst in utility boilers in the U.S.

WorleyParsons Group Inc.....7

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WorleyParsons
resources & energy

WorleyParsons is an industry leader in power project delivery and professional services. WorleyParsons provides innovative power solutions that result in on-time delivery, cost savings, and risk reductions. Our solutions improve the performance of existing assets, reduce carbon footprints, and meet the growing demand for environmental and profitable sustainability across the full asset spectrum, both in size and lifecycle. WorleyParsons' full range of power services and experience is driven by our customers' needs and tailored to optimize project results. WorleyParsons is ranked the #1 Top International Design firm and the #2 Power Design Firm by Engineering News-Record (ENR 2013).

2014 Upcoming Conferences



2014 NO_x-Combustion PCUG Conference

Hosted by Duke Energy

February 10-13, 2014
Renaissance Charlotte Suites Hotel
Charlotte, NC

Presented by
**Reinhold
Environmental**

2014 APC/PCUG Conference

Hosted by LG&E/KU

July 14-17, 2014
Galt House Hotel
Louisville, KY



www.reinholdenvironmental.com

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