

# Water and Wastewater Treatment Plant Energy Efficiency Workshop

Thursday, April 7, 2011

## .....Workshop Agenda.....

### 9:00 Opening Remarks

- John Davies, Deputy Commissioner, DEDI
- Cam Metcalf, Executive Director, KPPC

### 9:25 Fundamentals of Energy Savings Performance Contracting

- Michael Azzara, Business Development Manager, Siemens Industry, Inc.
- John Boyd, Business Development Executive, Utilities Dynamics, Inc.

### 10:10 How Performance Contracting has benefitted KCTCS

- David Crowell, Facilities Maintenance Director

### 10:25 Energy Savings Strategies in Water and Wastewater

- Ravi K. Bhaskar, Ph.D., Honeywell International
- Angela Hedgecock, P.E., LEED AP, Siemens Industry

### 11:30 Lunch

### 12:15 Case Studies – Presented by Energy Systems Group

- Dennis Clough, Managing Director, Mid-Atlantic Region
- Dan Sanders, Director of Energy Technologies, Research & Development

### 1:35 - 2:00 Panel Discussion

- Q&A, Best Practices, Where to Learn More!

Presented By:



Energy Services Coalition  
Kentucky Chapter



Kentucky Department for Energy  
Development & Independence

Sponsors:



Bluegrass Area  
Development District



Kentucky Pollution  
Prevention Center

# Speaker Bios

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## **Michael Azzara**

Business Development Manager - Siemens Industry, Inc. - Building Technologies Division

Mr. Azzara brings 18 years of experience in the development and implementation of energy efficiency projects for the public and private sectors in Kentucky and Southern Indiana. Mr. Azzara has been actively involved in the development of \$100 million of energy savings performance contracting projects in his career. Most recently, he was responsible for successful projects for the University of Louisville, Eastern Kentucky University, and a statewide traffic signal retrofit for the Kentucky Transportation Cabinet. Mr. Azzara is a past board member of the Energy Services Coalition, and has also served as co-chair of the Kentucky chapter. He is a graduate of the University of Louisville with both a M.Eng. and B.S. in mechanical engineering.

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## **Ravi K. Bhaskar, Ph.D.**

Honeywell International, Inc. - Waste Water Treatment Engineer

Dr. Bhaskar has over 20 years of experience in environmental engineering process management. Prior to joining Honeywell, Dr. Bhaskar was the lead developer and subject matter expert for the creation of the AquaSync® system, a comprehensive web based operating system for wastewater engineering applications. Dr. Bhaskar has managed wastewater optimization projects at plants ranging from the very small (less than 5 mgd) to the very large (greater than 150 mgd). He has provided process and design consulting for public and private clients. He operated an environmental testing laboratory that analyzed a million samples a year for water, wastewater, remediation, and hazardous waste applications. He holds two patents and earned a Ph. D in Chemical Engineering from the University of Kansas.

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## **John Boyd**

Business Development Executive - Utilities Dynamics, Inc.

Mr. Boyd is an experienced senior energy professional with more than 15 years in positions of responsibility providing customer oriented energy services and expediting the adoption of energy and environmental technology and its cost effective application in the marketplace. Since joining the Energy Industry, Mr. Boyd has developed projects in the Public, Industrial and Commercial. Notable projects include work in Pharma Manufacturing, Man-made Fibers, Printing, REITS, Colleges, K12, and Municipalities.

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## **Dennis Clough**

Managing Director, Mid-Atlantic Region - Energy Systems Group

Mr. Clough has responsibility for providing solutions to water and wastewater treatment facilities. Prior to this position Mr. Clough was with Custom Energy (now ConEdison Solutions), as a business development manager delivering energy savings projects in the mid-Atlantic states. His career includes experience with a national business and management consulting firm, and the United States Department of Energy (USDOE).

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## **David Crowell**

Facilities Maintenance Director - Kentucky Community and Technical College System (KCTCS)

Has worked in many positions in Commonwealth Government, but has been with the combined "Community and Technical Colleges" since they merged State wide in 1997. Mr. Crowell has a construction management background, but more importantly, he has been directly involved with several Energy Savings Performance Contracts (ESPC) with 3 different Energy Services Companies (ESCOs) over the past 5 years.

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## **John Davies**

Department for Energy Development and Independence - Deputy Commissioner

Mr. Davies serves as Deputy Commissioner within the Kentucky Department for Energy Development and Independence. Prior to this appointment he served as the department's director for the Division of Energy Efficiency and Conservation. Mr. Davies has managed energy programs for the Commonwealth since 2000. He has served as board member for the National Association of State Energy Officials, Kentucky Clean Fuels Coalition, the Southern States Energy Board Biobased Alliance, the Southeast Energy Efficiency Alliance and is an ex-officio member on the Kentucky Farm Bureau's Energy and Transportation Advisory Committee. Mr. Davies also serves as board secretary to the U.S. Department of Energy State Energy Advisory Board.

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## **Angela Hedgecock, PE, CEM LEED AP**

Siemens Industry, Inc. - Building Technologies Division - Alternative Energy Group

Ms. Hedgecock has 12 years of experience in the energy and water conservation fields and has developed projects in the K-12, higher education, healthcare, state and local government, LEED green buildings and municipal metering, water and wastewater markets. In her current role, Ms. Hedgecock is responsible for identifying and developing energy efficiency and process optimization project opportunities within the municipal water and wastewater market both jointly with Siemens Water Technologies and Siemens Turbo Machinery. She handles the project development activities of water meter AMR/AMI, water and wastewater treatment plant projects including data collection, field audits, cost and savings analysis, scope development, coordination with consulting engineers, and development of contract documents. Ms. Hedgecock resides in Mulberry, Florida.

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## **Cam Metcalf**

Executive Director - Kentucky Pollution Prevention Center

Mr. Metcalf is a national leader in pollution prevention, energy efficiency and sustainability. He joined the Kentucky Pollution Prevention Center (KPPC) as Executive Director in 1995. His experience includes tenures at the University of Tennessee's Center for Industrial Services, University of North Carolina-Asheville and the U.S. Environmental Protection Agency. Cam holds an M.S. in Civil Engineering & Environmental Science. Appointed by the Governor of Kentucky, he currently serves on the Board of Directors for the Conn Center for Renewable Energy Research and Environmental Stewardship.

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## **Dan Sanders**

Director of Energy Technologies, Research & Development - Energy Systems Group

Mr. Sanders has 17 years in the performance contracting industry. Dan's focus is on tracking developments and timing of emerging technologies that can be incorporated in energy savings performance contract projects for both broad and specific market applications, including water and waste water treatment facilities.