

# Call for Papers

## THE CLEARWATER CLEAN COAL CONFERENCE

**Theme: Technological Solutions to Energy Challenges**

**The 37<sup>th</sup> International Technical Conference on Clean Coal & Fuel Systems**

**June 3 to 7, 2012**

**Sheraton Sand Key, Clearwater, Florida, USA**

**Domestic Keynote Address, *The Future of Coal*,**

**Darlene Radcliffe, Duke Energy**

**and**

**International Keynote Address, *An Update and Future of Chinese Clean Coal*, Prof. Yue Guangxi, Tsinghua University**

Visit [www.coaltechnologies.com](http://www.coaltechnologies.com) for complete conference details



*Endorsing Organizations:*

- **American Public Power Association**
- **CANMET Natural Resources, Canada**
- **China Coal Research Institute**  
Ministry of Coal, People's Republic of China
- **Edison Electric Institute**
- **Export Assistance Center, U.S. Commercial Service**
- **Illinois Clean Coal Institute**
- **International Energy Agency: Coal Research**
- **Japan Coal Energy Center (JCOAL)**
- **National Mining Association**
- **National Rural Electric Cooperative Association**
- **Ohio Coal Development Office**
- **U. S. Geological Survey**

**Five Days – Solutions to Utility Energy Challenges – The Hottest Topics – The World’s Key Planners, Leading Experts and “Super Scientists” – The Most Comprehensive Program on Coal Technologies – From “Dawn to Dusk” – Representatives from 6 Continents**

**In Memoriam Professor Adel F. Sarofim** – On December 4, 2011, Adel F. Sarofim, Presidential Professor at University of Utah died. He has been an integral part of our conference for many years and served on the Conference Committee. It was our intention to host a banquet to honor him on Wednesday, June 6th. Plans are now being formulated for a memorial service, and a Keynote tribute and we are working to establish a scholarship fund in his honor and memory. Many of his former students were planning on attending and speaking at the dinner. Adel's death has touched many worldwide. We who are part of the Clearwater Clean Coal Conference mourn his death and will offer a tribute in his honor.

**MISSION STATEMENT** – Increased demand – coupled with energy security issues, uncertainty and increasing costs in the oil sector, and tightening environmental regulations – **make this conference a must for those involved in all aspects of power generation** who must meet the competitive pressures and environmental concerns of coal utilization in the 21<sup>st</sup> century.

The **State-of-the Art** in coal utilization will be presented in up-to-date technical papers, tutorials, and panels, covering cutting-edge developments on a range of timely topics. Presentations will deal **with technical solutions to problems; specific strategies; projects; innovations; industry trends; and or/regulatory compliance.** The program presents an extensive overview of emerging, evolving, and innovative technologies, fuels and/or equipment in the power generation industry. We are seeking papers from all countries worldwide.

## CONFERENCE HIGHLIGHTS

**Themed Luncheon** – A conference favorite is the Themed Luncheon on Wednesday. Industry leaders host tables of 8 where a specific topic is chosen by the host for discussion during lunch. Lunch this day is expanded to 90 minutes to allow sufficient time for as much discussion as possible. **(For a complete list go to [www.coaltechnologies.com](http://www.coaltechnologies.com))**

**Job Fair for Students** – Details are being worked out to allow students access to those organizations who are hiring from the academic community.

**The Worldwide Regulatory Outlook** – Through two major panels and an International and Domestic Keynote Address, the conference will provide insights on what regulations are under consideration that will have a significant impact on power producers worldwide.

## International Programs – Technical Developments – Policy Issues

Papers from the international community are strongly encouraged. In the 2011 conference 23 countries were represented at the conference. In addition, one-third of all attendees were from the international community. The international papers were related to energy/environmental developments throughout the world. The Committee also encourages papers that deal specifically with the topics covered in the Keynote Session, Panels, Tutorials and Plenary Sessions.

**Continuing Education Credits** – Through the Office of Undergraduate Education at Pennsylvania State University, the conference will provide CEUs or, in the case of engineers, PDHs. The fee is \$50/person for CEUs or \$75/person for PDHs. This covers registration, mailing certificates, etc. Complete details are available on our website.

**Polk Power Plant Tour – Friday, June 8, 2012** – Tampa Electric Company planned, engineered, built, and operates the Polk Power Plant Unit #1 Integrated Gasification Combined Cycle (IGCC) Power Plant. The project was partially funded under the Department of Energy's Clean Coal Technology Program pursuant to a Round III award. Please note the dress requirements: you must wear **long pants and boots or a full shoe; no tennis shoes nor sandals.** **Picture ID is required.**

**Best Student Paper Award** – Over the years the conference has benefitted from the many excellent papers given by students. To give these exceptional students well-deserved recognition, the Conference Committee now

awards the best paper from a student with the **Clearwater Coal Conference Best Student Paper Award**. [Guidelines for Best Student Paper.pdf](#)

## BACKGROUND

Nearly 300 professionals representing nearly all the major players in the electric utility industry in the United States were in Clearwater, Florida, USA for the 36<sup>th</sup> International Technical Conference on Clean Coal & Fuel Systems (informally known as “the Clearwater Clean Coal Conference”). The **Clearwater Clean Coal Conference** has earned a reputation as one of the premiere conferences on coal technologies as it grows in size and scope since its inception in 1975.

The **Clearwater Clean Coal Conference** offers participants 150 technical presentations in four days (Monday through Thursday from 8:00 a.m. to 6:00 p.m. in five concurrent sessions). Buffet style luncheons, a banquet dinner, and a fabulous beach reception offer networking opportunities with all conference participants. Nine Short Courses (eligible for continuing education credits) held on Sunday provide opportunities to learn about state-of-the-art and cutting-edge technologies.

In addition, critical panels on the important energy issues of the day are also scheduled on the four-day agenda.

An **Exhibit Center** showcasing 24 booths also provides opportunities to highlight accomplishments and achievements. The conference is held every year in Clearwater, Florida, at the Sheraton Sand Key Resort. We expect warm and sunny days with temperatures during the day in the 80’s. To take advantage of our glorious beach locale we offer all lunches out on the beach under our spacious tent.

**Panels:** To provide our attendees with the most comprehensive and up-to-date information, we offer panel presentations throughout the conference. By covering the important energy topics of the day we provide an overview of

emerging, evolving, and innovative technologies, fuels, policy and/or equipment in the power generation industry.

**Short Courses:** An important segment of the conference program is the tutorial section. On Sunday, we will offer 9 tutorials a wide variety of topics important to the energy community. Participation in any of the tutorials is included in the registration fee and open to conference registrants. However, you must register in advance. These tutorials will be offered on June 3<sup>rd</sup>

**Technical Sessions:** The conference presents topics of the greatest interest to the industry in the technical sessions. In some instances, energy leaders organize technical sessions on their area of expertise and invite specific topics for these sessions. The Conference Committee’s goal is to present an extensive overview of emerging, evolving, and innovative technologies, fuels and/or equipment in the power generation industry, through the presentation of accomplishments, opportunities and challenges in the technical areas listed below. The conference will offer 25 technical sessions over the 5 days of the conference.

**CONFERENCE HEADQUARTERS** – Sand Key is one of the 20 Best Beaches, according to many travel and tourism organizations. Directly on this beautiful beach is the Sheraton Sand Key, a 390-room luxury hotel. Each of the hotel’s newly refurbished rooms overlooks either the Gulf of Mexico or Clearwater Bay. Its seven secluded acres of white sandy beach set a tropical holiday mood for registrants to meet and discuss timely topics with colleagues from all over the globe.

**Sheraton Sand Key** 1160 Gulf Boulevard,  
Clearwater, Florida – Phone: 727-595-  
1611 FAX: 727-596-8488 \$179/night – Single or  
Double Visit <http://www.beachsand.com> for  
information about the Sheraton Sand Key

# Panels & Plenary Sessions

## Plenary Session:

- **Welcome** – Barbara A. Sakkestad, Coal Technologies Associates
- **Introduction** – Prof.-Dr. Klaus R.G. Hein, Monash University, Australia, Conference Committee Co-Chairman
- **International Keynote Address: An Update and Future of Chinese Clean Coal**  
Prof. Yue Guangxi, Tsinghua University
- **Panel: Worldwide Regulatory Outlook**  
Chris Smyrniotis, Fuel Tech

## Plenary Session

- **Overview**, Dr. Lawrence Bool, Praxair, Inc., Conference Committee Co-Chair
- **Domestic Keynote Address, The Future of Coal**  
Darlene Radcliffe, Director, Environmental Technology and Fuel Policy, Duke Energy
- **Panel: Domestic Regulatory Outlook**  
Chris Smyrniotis, Fuel Tech
- **Panel: Global Climate Change Panel**  
Dr. Robert Romanosky, National Energy Technology Laboratory, U.S. Department of Energy

## Two Concurrent Panels

- **Cyclic Operation of Coal Based Power Plants for Managing Large Scale Penetration of Intermittent Renewables**  
Dr. Janos Beer, Massachusetts Institute of Technology; and
- **Gasification and Conversion**,  
Dave Osborne, Xstrata Coal

## Plenary Sessions:

- **Oxyfuel**  
Dr. Ligang Zheng, CANMET, Canada and
- **iCap**  
Prof Alfons Kather, Technische Universität Hamburg-Harbug, Germany

*Prof. Terry Wall, University of Newcastle, Australia*

## Two Concurrent Panels

- **Biomass Utilisation**,  
Les Marshall, Ontario Power; and
- **Advances in Computational Fluid Dynamics**,  
Dr. Edmundo Vasquez, Clyde Bergemann

## Two Concurrent Panels

- **Post-Combustion Capture: Ready for Commercial Deployment**  
Yewen Tan, CANMET, and  
Lisa Rimpf, The Babcock & Wilcox Co.; and
- Jared P. Ciferno, Technology Manager, Existing Plants, Emissions & Capture, Office of Coal and Power R&D  
National Energy Technology Laboratory  
U.S. Department of Energy
- Dr. Song Wu, Director, Advanced Technologies  
Hitachi Power Systems America, Ltd.
- John M. Wheelton, Electric Power Research Institute (EPRI), Project Manager, Advanced Generation, c/o National Carbon Capture Center
- **Potential Application and Cost Implication of Fuels in Technology Operation**  
Dr. Ashwani Gupta, University of Maryland

## Two Concurrent Panels

- **Utilization of Low Rank Coals – Present Status and Future Chances**  
Prof.-Dr. Klaus R.G. Hein, Monash University and  
Chris Zygarlicke, Energy & Environmental Research Center; and
- **CO<sub>2</sub> in the Future**  
Dr. Klaus Lackner, Columbia University

## Short Courses

An important segment of the conference program are the Short Courses. On Sunday, we will offer 9 short courses with a wide variety of topics important to the energy community. Participation in any of the

courses is included in the registration fee, eligible for continuing education credits, and open to conference registrants. However, you must register in advance. These short courses will be offered on June 3<sup>rd</sup>.

- **Coal Gasification**

*Dr. Ronald Breault, National Energy Technology Laboratory, U.S. Department of Energy*

- **Computational Fluid Dynamics**

- **Fundamentals**

*Stefano Orsino, ANSYS Fluent*

- **Tampa Electric Co.** – topic to be determined.

- **Fundamentals of Ash Deposition for Utility Boilers and Solutions**

*Chris J. Zygarlicke, Energy & Environmental Research Center, et al*

- **Coal Fired Industrial Furnace Optimization**

*Mr. Allan Runstedtler, CanmetENERGY*

- **Oxy-fuel Technology Fundamentals**

*Reed Hendershot, Air Products, and*

*Dr. Lawrence Bool, Praxair, Inc.*

- **Coal: From the Earth to the Atmosphere**

*Dr. Edmundo Vasquez, Clyde Bergemann; Tony Widenman, Detroit Edison; and Ronald Affolter, U.S. Geological Survey*

- **Low NO<sub>x</sub> Burner Issues Resolution**

*Alan Paschedag, Siemens Environmental Systems & Services and*

*J. J. Letcavits, American Electric Power*

- **Drying High-Moisture Coals**

*Dr. Nenad Sarunac, Energy Research Center, Lehigh University and Mark Ness, Great River Energy*

- **Process Flow Models**

*Mike Mendez, Aspen Technology*

- **Coal Workshop**

*Tony Widenman, Detroit Edison*

## Technical Sessions

To ensure that the conference presents topics of greatest interest to the industry in the technical sessions, the following energy leaders are organizing technical sessions on topics of the greatest interest. The Conference Committee's goal is to present an extensive overview of emerging, evolving, and innovative technologies, fuels and/or equipment in the power generation industry, through the presentation of accomplishments, opportunities and challenges in the technical areas listed below. If you wish to participate in any of these sessions, submit an abstract according to the rules and indicate in which session you wish to be considered.

- **Advanced Energy Conversion Systems & Gasification Technologies**

*Massood Ramezan, Leonardo Technologies*

- **Advanced Modeling (Fundamental Studies and Modeling of Industrial Processes)**

*Dr. Edmundo R. Vasquez, Clyde Bergemann*

- **Alternative Liquid Fuels from Coal and Biomass**

*Chrisopher J. Zygarlicke, Energy & Environmental Research Center,*

*University of North Dakota*

- **Biomass Science & Technology**

*Dr. Edmundo R. Vasquez, Clyde Bergemann*

- **Biomass Co-Utilization**

*Les Marshall, Ontario Power Generation, Canada*

- **Chemical Looping**

*Dr. Adel Sarofim, Reaction Engineering International*

- **CO<sub>2</sub> Capture**

*Dr. Ronald Breault, National Energy Technology Laboratory, U.S. Department of Energy*

- **Coal Resources & Coal Beneficiation**

*Joseph C. Hirschi, Illinois Clean Coal Institute*

- **Maximizing Co-Firing of Biomass in Coal-Fired Boilers**

*Mark D'Agostini, Air Products*

*• Biomass Feed Preparation Dr. John Dooher, Adelphi University and Dooher Institute of Physics and Energy*

- **Improving Plant Availability/Utilisation**

*Dave Osborne, Xstrata Coal, AUSTRALIA*

- **Improving Efficiency and Reducing Emissions for Existing Power Plants**

*Dr. Nenad Sarunac, Energy Research Center, Lehigh University*

- **Low NO<sub>x</sub> Technology**

*J. J. Letcavits, American Electric Power, and Alan Paschedag, Siemens Environmental Systems & Services*

## **Low Rank Coal Utilization**

*Prof.-Dr. Klaus R.G. Hein, Monash University,  
AUSTRALIA*

- **Milling/Pulverisation**

*Dave Osborne, Xstrata Coal, AUSTRALIA*

- **Multi Emissions Control (PM, SO<sub>2</sub>, NO<sub>x</sub>, et al)**

*Bruce R. Clements, CanmetENERGY, CANADA*

- **Oxy-Fuel Technology (Overview & Demonstrations; Experimental Studies; Burner Developments; Emissions; and Fundamentals & Advanced Concepts)**

*Dr. Ligang Zheng, CanmetENERGY, CANADA*

- **PCC Pilot Plants**

*Dr. Erik Meuleman, CSIRO, AUSTRALIA*

- **Post Combustion CO<sub>2</sub> Capture**

*Dr. Yewen Tan, CanmetENERGY, CANADA; and  
Lisa Rimpf, The Babcock & Wilcox Company*

- **Use of Modeling Tools for Technology Assessment**

*Bradley Adams, Reaction Engineering  
International*

# Conference Agenda

## Sunday, June 3, 2012

Concurrent Tutorials from Noon to 6:15 p.m.:

- **Computational Fluid Dynamics Fundamentals**

*Stefano Orsino, ANSYS Fluent*

- **Tampa Electric Co.** – topic to be determined.
- **Fundamentals of Ash Deposition for Utility Boilers and Solutions**

*Chris J. Zygarlicke, Energy & Environmental Research Center, et al*

- **Coal Fired Industrial Furnace Optimization**

*Mr. Allan Runstedtler, CANMET Energy*

- **Oxy-fuel Technology Fundamentals**

*Reed Hendershot, Air Products, and*

*Dr. Lawrence Bool, Praxair, Inc.*

- **Coal: From the Earth to the Atmosphere**

*Dr. Edmundo Vasquez, Clyde Bergemann; Tony Widenman, Detroit Edison; and Ronald Affolter, U.S. Geological Survey*

- **Low No<sub>x</sub> Burner Issues Resolution**

*Alan Paschedag, Siemens Environmental Systems & Services and*

*J. J. Letcavits, American Electric Power*

- **Drying High-Moisture Coals**

*Dr. Nenad Sarunac, Energy Research Center, Lehigh University and Mark Ness, Great River Energy*

- **Process Flow Models**

*Mike Mendez, Aspen Technology*

- **Coal Gasification**

*Dr. Ronald Breault, National Energy Technology Laboratory, U.S. Department of Energy*

## Monday, June 4, 2012

8:00 a.m. – **Plenary Session**

- **Welcome** – *Barbara A. Sakkestad, Coal Technologies Associates*

- **Introduction** – *Prof.-Dr. Klaus R.G. Hein, Monash University, Australia, Conference Committee Co-Chairman*

- **International Keynote Address: An Update and Future of Chinese Clean Coal**, *Prof. Yue Guangxi, Tsinghua University*

- **Panel: Worldwide Regulatory Outlook** – *Chris Smyrniotis, Fuel Tech*

11:30 a.m. – **Luncheon** – Planning for Your Future

1:00 p.m. – **Plenary Session**

- **Overview**, *Dr. Lawrence Bool, Praxair, Inc.,*

*Conference Committee Co-Chair*

- **Domestic Keynote Address, The Future of Coal:**

*Darlene Radcliffe, Director, Environmental Technology and Fuel Policy, Duke Energy*

- **Panel: Domestic Regulatory Outlook** – *Chris*

*Smyrniotis, Fuel Tech*

4:00 p.m. – **Plenary Session**

- **Panel: Global Climate Change Panel**, *Dr. Robert*

*Romanosky, National Energy Technology*

*Laboratory, U.S. Department of Energy*

7:00 p.m. – **Welcome** in the Exhibit Center

## Tuesday, June 5, 2012

8:00 a.m. – Two Concurrent Panels

- **Cyclic Operation of Coal Based Power Plants for Managing Large Scale Penetration of Intermittent Renewables**, *Dr. Janos Beer,*

*Massachusetts Institute of Technology; and*

- **Gasification and Conversion**, *Dave Osborne,*

*Xstrata Coal*

10:00 a.m. – Break

10:30 a.m. – Five Concurrent Sessions

2:00 p.m. – **Plenary Session:**

- **Oxyfuel**, *Dr. Ligang Zheng, CANMET, Canada*

*and Dr. Terry Wall, University of Newcastle,*

*Australia and*

- **iCap**

*Prof Alfons Kather, Technische Universität Hamburg-Harburg, Germany*

4:00 p.m. – Break

4:30 p.m. – Five Concurrent Sessions

6:30 p.m. – **Beach Party**

## Wednesday, June 6, 2012

8:00 a.m. – Two Concurrent Panels

- **Biomass Utilisation**, *Les Marshall, Ontario Power; and*

- **Advances in Computational Fluid Dynamics**, *Edmundo Vasquez, Clyde Bergemann*

10:00 a.m. – Break

10:30 a.m. – Five Concurrent Sessions

12:30 p.m. – **Themed Luncheon**

2:00 p.m. – Two Concurrent Panels

- **Post-Combustion Capture: Ready for Commercial Deployment**, *Yewen Tan, CANMET,*

*and Lisa Rimpf, The Babcock & Wilcox Co.; and*

- **Potential Application and Cost Implication of Fuels in Technology Operation**, Klaus Hein, Monash University and Ashwani Gupta, University of Maryland

4:00 p.m. – Break

4:30 p.m. – Five Concurrent Sessions

7:00 p.m. – **Memorial service in honor of Presidential Professor Adel Sarofim**

### **Thursday, June 7, 2012**

8:00 a.m. – Two Concurrent Panels

- **Utilization of Low Rank Coals – Present Status and Future Chances**, Prof.-Dr. Klaus R.G. Hein, Monash University, Australia and Chris

Zygarlicke, Energy and Environmental Research Center; and

- **CO<sub>2</sub> in the Future**, Dr. Klaus Lackner, Columbia University

10:00 a.m. – Break

10:30 a.m. – Five Concurrent Sessions

12:30 p.m. – **Roundtable and Wrapup Luncheon**

2:00 p.m. – **Coal Workshop**, Tony Widenman, Detroit Edison

### **Friday, June 8, 2012**

**7:00 a.m. – Polk Power Plant Tour**

**CALL FOR PAPERS**  
**2012 CLEARWATER CLEAN COAL CONFERENCE**  
**The 37<sup>th</sup> International Technical Conference on Clean Coal & Fuel Systems**  
**June 3 to 7, 2012**  
**Sheraton Sand Key, Clearwater, Florida, USA**  
**Technological Solutions to Energy Challenges**  
**ABSTRACT REQUIREMENTS**

The abstract (**ONE PAGE IN LENGTH**), required by **JANUARY 21, 2012**, must be submitted via email and include:

The Proposed Paper with Exact Title and one page of information (no equations and no figures). The abstract must summarize the objective and current status of the work; and provide the committee with an accurate scope of the paper. Please indicate under which Technical Topics To Be Presented this paper falls. You should also indicate the name of the session chair if this also pertains to your paper.

Principal Presenter Listing (name, title, company, address, phone, FAX and email). Email addresses are required since this will be the primary mode of communication.

Complete Listings for all Co-Authors (name, title, company, address, phone, FAX and email).

The Principal Presenter must provide the information and is the person to whom all correspondence will be sent and who must meet the deadlines and obligations of the conference, which include: making a presentation at the 2012 conference; submitting a manuscript; and paying a conference fee.

The Principal Presenter must provide the information and is the person to whom all correspondence will be sent and who must meet the deadlines and obligations of the conference, which include: making a presentation at the 2012 conference; submitting a manuscript; and paying a conference fee.

The Principal Presenter is eligible for a discount and must remit the non-refundable registration fee of \$795 before **FEBRUARY 10, 2012**. There is no reimbursement for time spent or expenses incurred in preparing manuscripts or illustrations,

or for transportation to, and expenses at the conference.

The Clearwater Clean Coal Conference does not provide financial support to authors. The registration fee covers one technical paper; authors submitting more than one paper must include an additional \$100 per paper.

Notification of acceptance will be made by **FEBRUARY 10, 2012**. A manuscript for inclusion in the Proceedings and for distribution on CD-Rom (not to exceed 12 pages in length, with illustrative material) is required by **APRIL 16, 2012**.

Instructions for preparation of manuscripts (Proceedings and CD-Rom) will be sent with letters of acceptance. Presentations will be scheduled in Panels, Technical and/or Poster Sessions, as determined by the Conference Committee. The **ONE-PAGE** abstract should be sent via email to [BarbaraSak@aol.com](mailto:BarbaraSak@aol.com).

To encourage the participation of students, the Conference Committee is offering a reduced registration of \$395. In addition, one student paper will be awarded the Best Student Paper at the 2012 Clearwater Clean Coal Conference. The student will be evaluated in the quality of the paper, grasp of the topic presented and quality of the presentation at the conference. The student must be present to win.

Complete details on participation (important dates, fees, etc.) may be found in the Guidelines for Authors on the web site: [www.coaltechnologies.com](http://www.coaltechnologies.com)

## THE CONFERENCE COMMITTEE

The dedicated efforts and expertise of each Committee member result in the excellent Technical Program offered each year. The Committee reaches out to all segments of the

### **Air Products & Chemicals**

Mark D'Agostini

### **American Electric Power,**

J.J. Letcavits

### **ASME Power Div.:**

Dr. Ashwani Gupta, University of Maryland

### **Arizona State University**

Dr. Andrew V.G. Chizmeshya

### **The Babcock & Wilcox Company**

Hamid Sarv

### **Babcock Power, Inc.**

Bonnie Courtemanche, P.E.

### **CanmetENERGY, Canada**

Dr. Ligang Zheng

### **Clyde Bergemann**

Dr. Edmundo Vásquez

### **Columbia University**

Dr. Klaus Lackner

### **Detroit Edison**

Anthony Widenman

### **Doosan Babcock Energy Limited, Scotland**

Gerry Hesselmann

### **Energy & Environmental Research Center, University of**

### **North Dakota**

Christopher J. Zygarlilcke

### **Foster Wheeler North America Corp.**

Horst Hack

### **FuelTech Inc.**

Chris Smyrniotis

### **Gas Technology Institute**

Howard Meyer

### **Government Contracting Specialists**

Philip W. Winkler

energy industry so that the state-of-the-art (and beyond) in coal utilization is presented. Through their hard work, we continue to provide a world-renowned conference each year. This year's Conference Committee members are:

### **Illinois Clean Coal Institute**

Joseph Hirschi

### **Leonardo Technologies, Inc.**

Massood Ramezan

### **Massachusetts Institute of Technology**

Dr. Janos M. Beer

### **Monash University, Australia**

Prof.-Dr. Klaus R.G. Hein (Co-chairman)

### **Northeastern University**

Yiannis Levendis

### **Ontario Power Generation, Canada**

Les Marshall

### **Pennsylvania State University, EMS Energy Institute**

Bruce G. Miller

### **Praxair, Inc.**

Dr. Lawrence Bool

### **Savannah River National Laboratory**

Steve Xiao

### **Siemens Environmental Systems & Services**

Alan Paschedag

### **Tampa Electric Co.**

Yogesh M. Patel

### **Technische Universität Hamburg-Harburg, Germany**

Dr. Alfons Kather

### **Tsinghua University, People's Republic of China**

Prof. Yao Qiang

### **University of Alberta**

Dr. Rajender Gupta

### **University of Newcastle, Australia**

Dr. Terry Wall

### **U. S. Geological Survey**

Ron Affolter

### **Xstrata Coal, Australia**

Dave Osborne

## 37<sup>th</sup> International Technical Conference on Clean Coal & Fuel Systems

12548 Granite Ridge Drive

North Potomac, MD 20878

301-330-2256

[www.coaltechnologies.com](http://www.coaltechnologies.com)

Email: [Barbarasak@aol.com](mailto:Barbarasak@aol.com)

## The Clearwater Clean Coal Conference

**Deadline for Abstracts:  
January 21, 2012**