

THE CLEARWATER CLEAN ENERGY CONFERENCE

AGENDA

SUNDAY – June 3, 2018

Short Courses

9:00 – 11:00 a.m. – Combustion Issues –
Alan Paschedag, Covanta, Inc., and J.J. Letcavits, American Electric Power

11:15 a.m. – 1:15 p.m. – Practical Optimization of the Coal Supply Chain –
G.H. Luttrell, Virginia Tech; and P. J. Bethell, Marshall Miller and Associates

1:30 p.m. – 3:30 p.m. – Combustion Fundamentals –
Prof. Ashwani K. Gupta, University of Maryland

3:45 p.m. – 5:45 p.m. – Advanced Biomass Pellet Characteristics for Utility Scale Cofiring and Conversion Programs –
Les Marshall, Ontario Power Generation Canada

3:00 p.m. – Exhibit Center Setup in the Island Ballroom

MONDAY – June 4, 2018

8:30 a.m. - Technical Session Moderators' Meeting – Gulf Room

9:00 a.m. - Continental Breakfast – Exhibit Center

9:30 a.m. – Keynote Address: *Scott Smouse, Senior Advisor to Deputy Assistant Secretary, for Clean Coal & Carbon Management, U.S. Department of Energy, USA*

Panel: Emerging International Developments in Power Generation
Moderators: Prof. Terry Wall, University of Newcastle, Australia; Klas Andersson (Chalmers University, Sweden) Brigham Young University; and Prof. Viktor Scherer, Ruhr-University Bochum, Germany

• *Scott Smouse, Senior Advisor to Deputy Assistant Secretary, for Clean Coal & Carbon Management, U.S. Department of Energy, USA*

- *Prof. Dongke Zhang, University of Western Australia and Research Professor of the Chinese Academy of Sciences, Australia*
- *Prof. Yang Zhang, Key Laboratory for Thermal Science and Power Engineering of the Ministry of Education, Tsinghua University, China*

11:45 a.m. – Lunch – Exhibit Center

1:00 p.m. Panel: U.S. Energy Portfolio Today and in the Future
Moderator: Bonnie Courtemanche, Director of Quality and Safety, BPE/BPS, Riley Power, Inc.

- *Andrew Hlasko, U.S. Department of Energy, USA*

3:00 p.m. – Break – Exhibit Center

3:30 p.m. – Four Concurrent Sessions

- **Session 1 - Sand Key Room - Biomass Co-Firing**
Les Marshall, Ontario Power Generation, Canada
- **Session 2 - Gulf Room - Innovative Low Carbon Fuels I**
Dongke Zhang, The University of Western Australia, Australia
- **Session 3 - Palm Room - Supercritical CO₂ I**
Joshua Stanislawski, UNDEERC and Bhupesh Dhungel, Air Liquide
- **Session 4 - Bay Room - Carbon Capture Utilization & Sequestration I**, *Dr. Erik Meuleman, ION Engineering, and Dr. David Hopkinson, National Energy Technology Laboratory, U.S. Department of Energy*

5:30 p.m. Beach Party – Poolside

TUESDAY – June 5, 2018

7:30 a.m. Continental Breakfast in the Exhibit Center

8:00 a.m. Three Concurrent Sessions:

- **Session 5 - Sand Key Room - Energy From Waste**
Alan Paschedag, Covanta
- **Session 6 - Gulf Room - Innovative Low Carbon Fuels II**
Dongke Zhang, The University of Western Australia
- **Session 7 - Palm Room - Oxy-Combustion I**
Dr. Klas Andersson (Chalmers University, Sweden) and Dr. Andrew Fry, Brigham Young University

10:00 a.m. Break in the Exhibit Center

10:30 a.m. Three Concurrent Sessions

- **Session 8 - Sand Key Room - Fluidized Bed and Dense Particle Flows**, *Dr. Ronald Breault, National Energy Technology Laboratory, U.S. Department of Energy*
- **Session 9 - Gulf Room - Combustion Fundamentals**
Dr. Weihong Yang, KTH Royal Institute of Technology, Sweden
- **Session 10 - Palm Room - Oxy-Combustion II**
Dr. Klas Andersson (Chalmers University, Sweden) and Dr. Andrew Fry, Brigham Young University

12:30 p.m. – Lunch – Exhibit Center

2:00 p.m. Panel: Energy From Waste

Moderator: Prof. Ashwani Gupta, University of Maryland

- *Dr. Marco Castaldi, City University of New York, USA*
- *Dr. Kunio Yoshikawa, Tokyo Institute of Technology, JAPAN*
- *Dr. Somrat Kerdsuwan, King Mungkut University of Technology North Bangkok, THAILAND*

- *Dr. Halina Pawlak-Kruczek, Head of Boiler, Combustion & Energy Process Department, Wrocław University of Technology, POLAND*

3:30 p.m. Break

4:00 p.m. Four Concurrent Sessions

- **Session 11 - Sand Key Room - Radiative Heat Transfer**
Brad Adams, Brigham Young University
- **Session 12 - Gulf Room - Gasification**
Massood Ramezan, KeyLogic
- **Session 13 - Palm Room - Chemical Looping I – Oxygen Carrier Development**, *Dr. Andrew Tong, Ohio State University and Dr. Mandar Kathe, Ohio State University*
- **Session 14 - Beach Room - Carbon Capture Utilization & Sequestration II**, *Dr. David Hopkinson, National Energy Technology Laboratory, U.S. Department of Energy and Prof. Jochen Lauterbach, University of South Carolina*

6:00 p.m. – Conclusion of Technical Program

WEDNESDAY – June 6, 2018

7:30 a.m. Continental Breakfast – Exhibit Center

8:00 a.m. Four Concurrent Sessions:

- **Session 15 - Beach Room - Combustion Technologies**
J.J. Letcavits, AEP and Alan Paschedag, Covanta
- **Session 16 - Gulf Room - Recovery of Rare Earth Elements I**
Eric Eddings, University of Utah
- **Session 17 - Palm Room - Chemical Looping II – Process and Reactor Design and Testing**
Thomas Flynn, Babcock and Wilcox, and Dr. Luke Neal, North Carolina State University
- **Session 18 - Bay Room - Biomass To Fuel**

*Prof. Viktor Scherer, Ruhr-Universität
Bochum, Germany*

10:00 a.m. Break – Exhibit Center

10:30 a.m. Four Concurrent Sessions

- **Session 19 - Beach Room - Supercritical CO₂ II**
*Joshua Stanislawski, UNDEERC and
Bhupesh Dhungel, Air Liquide*
- **Session 20 - Gulf Room - Carbon Capture Utilization & Sequestration III - Dr. Sankhar Bhattacharaya, Monash University, Australia**
- **Session 21 - Palm Room - Modeling I**
*Dr. Edmundo Vasquez, Consultant,
Boiler Combustion and Emission Controls*
- **Session 22 - Beach Room - Recovery of Rare Earth Elements II**
Prof. Eric Eddings, University of Utah

11:50 a.m. – Themed Lunch – Exhibit Center

- **Positioning to Win Government R&D Funding**, *Phil Winkler*
- **Energy From Waste**, *Alan Paschedag, Covanta*
- **Adaptive Mining Chains**, *Dr. Dave Osborne, Somerset Int'l Australia Pty. Ltd., Australia*
- **Biomass Utilization**, *Les Marshall, Ontario Power Generation, Canada*
- **Modular Energy Systems**, *Massood Ramezan, KeyLogic LLC*
- **Fuel Reforming**, *Prof. Ashwani Gupta, University of Maryland*
- **Combustion and Low NO_x Burners**, *J.J. Letcavits, AEP*
- **High Efficiency and Low Emission Technologies**, *Dr. Raj Gupta, University of Alberta, Canada*

1:30 p.m. – Panel: Adaptive Mining Chains
– *Moderator: Dr. Dave Osborne, Somerset International Australia Pty Ltd., AUSTRALIA*

- *Michael O'Brien, Team Leader, Enhanced Coal Processing, Mining and Processing Technologies/Coal Mining Program, Queensland Centre for Advanced Technologies (QCAT), CSIRO, AUSTRALIA*

- *Peter Bethell, Senior Principal: Mineral Processing, Marshall Miller and Associates, USA*

- *Prof. Ron Honaker, Department of Mining Engineering, University of Kentucky*

3:30 p.m. – Break in the Exhibit Center

4:00 p.m. – Exhibit Center Closes

4:00 p.m. – Four Concurrent Sessions

- **Session 23 - Beach Room - Innovative Power Applications**
*David Tucker, National Energy Technology Laboratory, U.S.
Department of Energy and Dalia El Tawy, Siemens*
- **Session 24 - Gulf Room - Chemical Looping III – Process and Component Analysis**
Dr. Andrew Tong, Ohio State University, and Vasudev Pralhad Haribal, North Carolina State University
- **Session 25 - Palm Room - Modeling II**
Dr. Edmundo Vasquez, Consultant, Boiler Combustion and Emission Controls
- **Session 26 - Bay Room - Upgrading/ Beneficiation**
Dr. Dave Osborne, Somerset International Australia Pty Ltd., Australia

5:40 p.m. – Conclusion of the Technical Program

5:40 p.m. – Conference Committee Meeting – Palm Room

THURSDAY – June 7, 2018

7:30 a.m. Continental Breakfast – Island Ballroom

8:00 a.m. – Panel: Gasification Technology – A Path Forward to Overcome Current Challenges

Moderator: Massood Ramezan, KeyLogic

- *Dave Lyons, Technology Manager, National Energy Technology Laboratory, U.S. Department of Energy;*
- *Francis Lau, Chief Technology Officer, Synthesis Energy Systems*
- *Joshua Stanislawski, Energy & Environmental Research Center, University of North Dakota*

10:00 a.m. – Break – Island Ballroom

10:30 a.m. – Three Concurrent Sessions

- **Session 27 - Beach Room - Load Following Issues & Turbines**
Yogesh Patel, TECO
- **Session 28 - Gulf Room - Emerging Analytical Approaches**
Dr. Dave Osborne, Somerset International Australia Pty Ltd., Australia
- **Session 29 - Bay Room - Carbon Capture Utilization & Sequestration IV**
Dr. Erik Meuleman, ION Engineering

11:50 a.m. – Lunch & Presentation of the Best Student Paper Award – Roundtable/Wrap-up Discussion – Island Ballroom

FRIDAY – June 8, 2018

6:30 a.m. – Continental Breakfast – Lobby 2

7:00 a.m. – Departure of the Covanta/Hillsborough and Polk Power Plant Tours