

Hilton Orlando Bonnet Creek • Orlando, Florida



# 18TH ANNUAL NORTH AMERICAN WASTE-TO-ENERGY CONFERENCE

*"At NAWTEC you get to talk with people who really know what's going on in the waste-to-energy business. It's your opportunity to learn from their experience as well as share your own knowledge."*

— Damon Taam, Spokane Regional Solid Waste System



MAY 11-13, 2010

Co-Sponsored by:



**ENERGY**  
RECOVERY COUNCIL

In Partnership With:



**WtERT**

# MONDAY - MAY 10, 2010

**3:00 PM – 7:00 PM**

Registration Open

**5:30 PM – 7:00 PM**

Monday Night Meet n' Greet at Sena Bar & Lounge

# TUESDAY - MAY 11, 2010

**8:00 AM – 4:30 PM**

Registration Open

**8:00 AM – 9:00 AM**

Continental Breakfast

**9:00 AM – 12:00 PM**

Opening Remarks and Keynote Presentations

## Opening Remarks

*Ted Michaels, President, Energy Recovery Council*

## Keynote Presentations

### Waste-to-Energy is Back and Better Than Ever

*Mark Weidman, President, Wheelabrator Technologies Inc.*



### Building Bridges, Burning Trash

*Robin Davidov, Executive Director, Northeast Maryland Waste Disposal Authority, Chair, U.S. Conference of Mayors' Municipal Waste Management Association*



### Saving Resources and Protecting Climate: A Waste Policy Concept

*Dr. Michael Weltzin, Scientific Assistant in the Parliamentary Group of Alliance 90 / The Greens in the German Bundestag*



**12:00 Noon – 1:30 PM**

ASME Materials and Energy Recovery Division

2010 Awards Luncheon & Ceremony



**1:30 PM – 4:30 PM**

Concurrent Technical Sessions

## SESSION 1: Contract Negotiations and Project Developments

*Session Chair: Bob Hauser, Pinellas County Utilities, Fla.*

### Westchester WTE - What To Do After 25 Years

*Joseph Krupa, Malcolm Pirnie, Inc.*

### Palm Beach County WTE Expansion Model

*Thomas Henderson, Malcolm Pirnie, Inc.*

### There are Four R's In Zero: Reduce, Reuse, Recycle and Recover- The Role of EFW in Durham's Integrated Sustainable Waste Management System

*Shawn Worster, HDR Engineering*

**2:30 PM – 3:00 PM**

**BREAK**

### The Olmsted County Expansion Project - Approach, Completion and Summary

*Matthew Clark, Renewable Resource Consultants*

### Behind the Scenes: Historic Agreement to Develop U.S Virgin Islands First Alternative Energy

*Robert Brickner, Gershman, Brickner and Bratton, Inc.*

### Developing A 21st Century Energy-from-Waste Facility in American Samoa

*Marc Rogoff, SCS Engineers*

## SESSION 2: Concepts and Validation for Advancing WTE Technologies

*Session hosted by*



*Session Chairs: Nickolas Themelis, Columbia University  
Zhixiao Zhang, Hangzhou Dianzi University*

### Industrial-Scale R&D in Challenging Times

*Ralf Koralewska, MARTIN GmbH*

### High Efficiency Waste-to-Energy Power Plants: Combining Municipal Solid Waste and Natural Gas or Ethanol

*Sergio Ribeiro, University of Brazil - Rio de Janeiro*

### Generating Renewable Electric Power and Reducing Carbon Footprint by Converting Low-Grade Heat to Electrical Energy

*Adam Halsband, EISENMANN Corporation*

**2:30 PM – 3:00 PM**

**BREAK**

### A Risk Assessment Framework for Evaluating Health Risks from New and Emerging Waste Management Technologies

*Stephen Zemba, Cambridge Environmental Inc.*

### Concepts and Experiences for Higher Plant Efficiency with Modern Advanced Boiler and Incineration Technology

*Armin Main, Fisia Babcock Environment*



## SESSION 2: (continued)

**Comparative Assessments of the Factors Influencing Waste Management Decisions in Selected Communities and the Environmental and Economic Impacts of those Decisions Using the EPA's MSW-DST**

*Jesse Miller, Environmental Protection Agency*

**Renewable Energy at a Sustainable Cost: Using a Combined Heat and Power WTE Facility In The Paper Industry**

*Luc Ceyssens, Keppel Seghers Inc*

**5:00 PM – 7:30 PM**

**Opening of NAWTEC 18 Trade Show and Welcoming Reception**

# WEDNESDAY - MAY 12, 2010

**7:30 AM – 4:30 PM**

**NAWTEC Registration Open**

**7:30 AM – 9:00 AM**

**Continental Breakfast in Exhibit Hall**

**9:00 AM – 12:30 PM**

**Concurrent Technical Sessions**

## SESSION 3: WTE's Role in Mitigating Climate Change

*Session Chair: Mark White, Covanta Energy*

**Sustainability in Energy-from-Waste Plants: A Prevention and Conservation Challenge**

*Ram Tewari, Broward County, Fla.*

**Fishing for Energy Partnership Cleans up Marine Debris Pollution and Promotes Benefits of Recycling & Energy-from-Waste**

*Christine McCoy, Covanta Energy*

**Energy Recovery from Municipal Solid Waste in California: Needs and Challenges**

*Alexander Helou, City of Los Angeles, Bureau of Sanitation, Calif.*

**Measuring the Sustainable Return on Investment (SROI) Costs and Benefits of Waste-to-Energy**

*John Williams, HDR Engineering*

**10:30 AM – 11:00 AM BREAK**

**Energy Recovery Improvement Using Organic Rankine Cycles at Covanta's Haverhill Facility**

*Heping Cui, Covanta Energy*

**Bio Green Waste-to-Energy: An Old Technology with a New Future**

*John Norton, Norton Engineering*

**Potential for Energy-from-Waste Carbon Offsets in North America**

*Michael Van Brunt, Covanta Energy*

**Integrated Recycling Strategy at Waste-to-Energy Facilities**

*Hala Sfeir, Brown and Caldwell*

## SESSION 4: Advanced Air Emission Control Technologies

*Session Chair: Sherman Patton, Malcolm Pirnie*

**2200 TPD RDF Facility with Advanced Boiler and Air Pollution Control Systems**

*Richard Abrams, Babcock Power*

**Comparison of Acid Gas Control Technologies in EFW Facilities**

*Craig Kedrowski, AE&E Von Roll*

**Emerging Technology for Multi-Pollutant Control on the Emissions of a Biomass Fired Boiler**

*Bradley Ginger, EISENMANN Corporation*

**10:30 AM – 11:00 AM BREAK**

**Dry Sorbent Injection of Sodium Sorbents for SO<sub>2</sub>, HCl and Mercury Mitigation**

*Yougen Kong, Solvay Chemicals Inc*

**Advancing WTE through Research and Technology Advanced Air Emissions Control**

*Anne Minga, Kuttner LLC*

**Energy-from-Waste and Dioxin Emission Control: Is There a Role for PVC Separation Programs?**

*Samuel Joshi, Covanta Energy*

**Thanks to Our Sponsor!**

**HDR**

**12:30 PM – 2:00 PM**  
**2:00 PM – 4:30 PM**

Lunch in the Exhibit Hall  
Concurrent Technical Sessions

## **SESSION 5: Managing Corrosion and Boiler Reliability**

*Session Chair: Thomas M. White, Wheelabrator Technologies, Inc.*

### **Advancements in Grate Cooling Technology**

*Emily Owens, Wheelabrator Technologies*

### **New Generation Of Tube Surface Treatments Help Improve EfW Boiler Reliability**

*Greg Epelbaum, Covanta Energy*

### **High Temperature Corrosion in a 24 MW Waste-to-Energy Plant**

*Wenchao Ma, Tianjin University, China*

### **DyNOR(TM) DeNO<sub>x</sub> Performance Confirmed in Further MSW Plants**

*Peter Chromec, AE&E Von Roll*

**3:00 PM – 3:30 PM BREAK**

### **Fuel-Specific On-Load Boiler Cleaning Solutions in Waste Incineration Plants: Challenges, Concepts, Experiences**

*Christian Mueller, Clyde Bergemann*

### **Rear Ventilated Boiler Wall Protection**

*Stephan Mulch, Juenger + Graeter GmbH*

### **Fireside Corrosion Management in an RDF Fired Energy-from-Waste Boiler**

*Stephen Vrchota, Great River Energy*



**4:45 PM – 5:30 PM**

### **Legislative Update**

*Ted Michaels, Energy Recovery Council*

*Scott DuBoff, Local Government Coalition for Renewable Energy*

This session will highlight the most recent federal legislative developments that will affect waste-to-energy.

**5:30 PM – 6:00 PM**

**SWANA Waste-to-Energy Technical Division Meeting (Open to All)**

**8:00 AM – 12:00 Noon**

Registration Open

**8:00 AM – 9:00 AM**

Continental Breakfast

**9:00 AM – 11:30 AM**

Concurrent Technical Sessions

## **SESSION 6: Research in the U.S. and China**

*Session hosted by*



*Session Chairs: Eilhann Kwon, Columbia University*

*Marco Castaldi, Columbia University*

### **Ultrafine Particles from WTE and Other Combustion Sources**

*Lital Yinon, Columbia University*

### **Analysis of Thermal Plasma-Assisted WTE Processes**

*Caroline Ducharme, Columbia University*

### **Experimental Research on Microwave Induced Thermal Degradation of Waste Printed Circuit Boards**

*Zhixiao Zhang, Hangzhou Dianzi University, China*

### **Transforming Municipal Solid Waste into Fuel via the Gasification/Pyrolysis Process**

*Eilhann Kwon, Columbia University*

**3:00 PM – 3:30 PM BREAK**

### **An Investigation into the Impact of CO<sub>2</sub> Co-Feed to the Gasification / Pyrolysis**

*Amy Knorpp, Columbia University*

### **Waste Composition Studies: Impact on Resource Recovery**

*Mark Bobman, BRRFOC*

### **A Study on Performance and Emissions of a 4-Stroke IC Engine Operated on Methane with Carbon Dioxide**

*Jecheon Lee, Columbia University*

### **Chlorine Sources, Sinks and Impacts in WTE Power Plants**

*Nickolas Themelis, Columbia University*

# THURSDAY - MAY 13, 2010



For SWANA Continuing Education Unit (CEU) and ASME Professional Development Hour (PDH) information, please visit [www.NAWTEC.org](http://www.NAWTEC.org)

### **SESSION 7: Improvements for WTE Performance**

*Session Chair: Ted Michaels, Energy Recovery Council*

**Optimizing System Performance and Revenues from Metals Recovery Systems (MRS) at WTE Facilities**  
*Thomas M. White, Wheelabrator Technologies*

**Recovery of Non-Ferrous Metals from a Municipal RDF Facility**  
*Nathiel G. Egosi, RRT Design & Construction*  
*Rob Weidner, City of Ames, Iowa*

**Twenty Year Operating History of Flue Gas Cleaning Systems at Three Municipal Waste Combustor Plants**  
*K. Sampath Kumar, The Babcock & Wilcox Power Generation Group*

**10:00 AM – 10:30 AM**      **BREAK**

**WTE Health and Safety Panel Discussion**  
*Panel hosted by*



This panel will highlight case studies of successful waste-to-energy facility health and safety programs and review the latest regulations impacting facility operations.

### **SESSION 8: Conversion Technologies**

*Session Chair: Joe Murdoch, HDR Engineering*

**Successful Procurement of Emerging Waste-to-Energy Technologies**  
*Teno West, Pannonie Lopes Devereaux & West LLC*

**Comprehensive Economic Feasibility Analysis of a Proposed Plasma Arc Gasification Waste-to-Energy Plant: The Marion, Iowa Experience**  
*Bruce Clark, SCS Engineers*

**The Latest and Greatest on the Resurgence of Waste-to-Energy and Conversion Technologies**  
*Harvey Gershman, Gershman, Brickner and Bratton, Inc.*

**10:00 AM – 10:30 AM**      **BREAK**

**The Status Of Existing Biomass Gasification And Pyrolysis Facilities In North America**  
*Theodore Pytlar, Dvirka and Bartilucci Consulting Engineers*

**Plasma Gasification: Lessons Learned**  
*Shinichi Osada, Alter NRG Corp.*

## **FACILITY TOUR**

**THURSDAY, MAY 13**

**12:00 Noon – 5:00 PM**

*(separate registration fee, includes lunch)*

**Covanta Lake, Inc. - Okahumpka, Fla.**

The Lake County Resource Recovery Facility, located south of Leesburg in central Florida, began commercial operation in March 1991. The facility processes a total of 528 tons-per-day of solid waste while generating up to 14.5 megawatts of renewable energy that is sold to Florida Power Corporation.



# HOTEL INFORMATION



**Hilton**  
Orlando Bonnet Creek

**Hilton Orlando Bonnet Creek**  
**[hiltonbonnetcreek.com](http://hiltonbonnetcreek.com)**

Phone: 1.800.HILTONS • Rate: \$170 S/D  
Cut-off: April 10, 2010 • Booking Code: NAWTEC



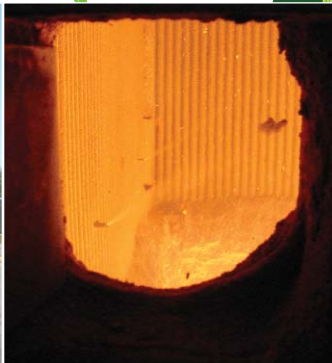
# EXHIBITOR AND SPONSOR INFORMATION

**Interested in exhibiting or sponsoring at NAWTEC?**  
**Contact Rich Ryan at [exhibits@swana.org](mailto:exhibits@swana.org) or 330.686.0353.**

## Current Exhibitors:

CDM  
Covanta Energy  
Dedicated Transport  
Detroit Stoker Company  
Gershman, Brickner & Braddon, Inc.  
Ecochem Analytics  
Firestone Specialty Products  
Frontline BioEnergy  
Hemlick Corp.  
Innovative Equipment Solutions  
J&G Refractories GmbH

Kennametal Conforma Clad  
Mobile Dredging  
Natural State Research  
OMI Industries, Inc.  
Plattco Corporation  
Powerhouse Technology, Inc.  
RRT Design & Construction  
Saint-Gobain Ceramic Materials  
Southern Recycling  
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# 18TH ANNUAL NORTH AMERICAN WASTE-TO-ENERGY CONFERENCE

May 11- 13, 2010 – Orlando, FL • Register Online at [www.NAWTEC.org](http://www.NAWTEC.org)

Name \_\_\_\_\_ SWANA ID \_\_\_\_\_

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☐ Please check here if you do NOT want your contact information included on the event participant list to be distributed at the conference

☐ Please check here if you are requesting vegetarian meals or have any dietary of ADA needs (attach specific information)

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REGISTRATION OPTIONS (all amounts in U.S. dollars) *Please note member rates only apply to SWANA, ASME, and ERC members – You MUST provide your membership ID number (or Company Names for ERC members) in order to register at the member rates.	Early Registration Through April 16 <sup>th</sup>		Registration After April 16 <sup>th</sup>		TOTAL
	Member	Non-Member	Member	Non-Member	
<input type="checkbox"/> <b>Technical Sessions</b> (May 11-13) <i>Full registration includes scheduled technical sessions, meals, admittance to Welcoming Reception and Trade Show and one copy of proceedings. One-day registration includes only scheduled technical sessions and meals for registered day.</i>					
<input type="checkbox"/> Full Registration (Tue. – Thu.)	<input type="checkbox"/> \$550	<input type="checkbox"/> \$690	<input type="checkbox"/> \$600	<input type="checkbox"/> \$768	
<input type="checkbox"/> Government Full Registration (Tue. – Thu.)	<input type="checkbox"/> \$490	<input type="checkbox"/> \$605	<input type="checkbox"/> \$530	<input type="checkbox"/> \$655	
<input type="checkbox"/> Tuesday Only (May 11th)	<input type="checkbox"/> \$265	<input type="checkbox"/> \$350	<input type="checkbox"/> \$305	<input type="checkbox"/> \$400	
<input type="checkbox"/> Wednesday Only (May 12th)	<input type="checkbox"/> \$265	<input type="checkbox"/> \$350	<input type="checkbox"/> \$305	<input type="checkbox"/> \$400	
<input type="checkbox"/> Thursday Only (May 13th)	<input type="checkbox"/> \$160	<input type="checkbox"/> \$175	<input type="checkbox"/> \$180	<input type="checkbox"/> \$200	
<input type="checkbox"/> <b>Full Student Registration</b> (NOTE: must submit proof of full-time status, meals must be purchased separately- please contact SWANA for pricing)	<input type="checkbox"/> \$50				
<input type="checkbox"/> <b>Welcoming Reception and Exhibition Only</b> (Tuesday, May 11th )	<input type="checkbox"/> \$100 member/non-member				
<input type="checkbox"/> <b>Facility Tour</b> – Thursday, May 13th, 12pm – 5pm (NOT included in registration fee)	<input type="checkbox"/> \$65 – Member		<input type="checkbox"/> \$75 – Non-Member		
	<b>TOTAL DUE</b>				\$

## METHOD OF PAYMENT

PLEASE READ SWANA/NAWTEC'S PAYMENT & CANCELLATION/REFUND POLICIES BELOW, SELECT A PAYMENT METHOD, AND SIGN THE PAYMENT ACKNOWLEDGMENT

My check for \$\_\_\_\_\_ made out to SWANA is enclosed. My P.O. Number is \_\_\_\_\_ (Copy of P.O. must be attached)

Charge to: ☐ Visa ☐ MasterCard ☐ Discover ☐ American Express ☐ Diners Club

Card #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Payment Policy: SWANA/NAWTEC accepts cash, checks, money orders, American Express, MasterCard, Discover, Diners Club, and Visa for payment of all events. Purchase Orders for future invoicing will be accepted from individuals who have been Members of the organization for at least 90 days and who have an account in good standing. A copy of all Purchase Orders must accompany the registration form.

Cancellation/Refund Policy: Cancellations for SWANA/NAWTEC meetings must be in writing. Phone cancellations will not be accepted. Refunds will be issued as follows: 30 days or more prior to the start of the event, 100% of the registered conference amount less a \$50 administration fee, (we will not issue refunds for tours or other special events offered during the conference). Any cancellation received less than 30 days from the start of the event will be eligible for a SWANA/NAWTEC future event meeting credit worth 50% of the registered conference amount, (not including tours and other special events offered during the conference). This meeting credit can be used for any future SWANA/NAWTEC national event and is good for one (1) year from the date of issue. We invoice for no shows!!

Payment Acknowledgement: (REQUIRED) By signing this registration form, I acknowledge that I have read and accepted the payment and refund policies listed in this brochure. Furthermore, I understand that if I fail to appear that I, or my organization, will still be responsible for the total charges due.

Signature Required: \_\_\_\_\_ Date: \_\_\_\_\_

**Please fax your completed registration form to SWANA at 240-645-1833.**

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MAY 11-13, 2010

Hilton Orlando  
Bonnet Creek  
Orlando, Florida



**SWANA**  
SOLID WASTE ASSOCIATION  
OF NORTH AMERICA

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