

The Canadian Institute presents

Waste-Based Energy

Capitalizing on Opportunities in Energy Recovery and Gas Capture from a Range of Industrial Waste

Learn all the vital information affecting the planning, development and operation of waste-based energy projects, including:

- » Critical information about **planning, cost estimations and the environmental assessment process**
- » Best possible ways to **access funding** for your projects in a credit starved environment
- » How to **mitigate negative public perception** about EFW facilities
- » Update on the **latest technologies** in the waste to energy space
- » Generating **community involvement** in waste-based energy projects
- » Examining the **innovative uses of biogas** for conversion into energy
- » Learning how to **produce liquid natural gas (LNG) from waste**
- » **International perspectives** on waste to energy projects

Plus!

Take advantage of detailed instruction in our hands-on workshop - Health Risk Assessment and Evaluation for Energy-From-Waste Projects on November 25th, 2009

see pg 5 for details



Hear from industry leaders and specialists including:

- Bio-en Power Inc.
- Covanta Energy
- Canadian Energy-From-Waste Coalition (CEFWC)
- Canada Composting Inc.
- Citizens' Network on Waste Management
- Columbia University
- Golder Associates Ltd.
- Linde North America Inc.
- Metro Vancouver
- Metro Vancouver Waste Committee
- Miller Thomson LLP
- Ontario Power Authority
- Pario Capital
- RWDI
- Ramboll, Denmark
- Stantec
- S4 Energy Solutions
- The Regional Municipality of Durham
- Waste Management Inc.
- Wheelabrator Technologies Inc.

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Discover the Latest Developments in the Rapidly Growing EFW Industry

Distinguished Faculty

Recovering energy from waste provides a solution to the problem of increasing waste, as well as an opportunity for developers of alternative energy.

However, integrating this waste diversion method into the hierarchy of other options can be challenging. Whether you are developing an integrated waste management strategy, scanning through the best practices for energy recovery or navigating the regulatory approval process for your new facility, **The Canadian Institute's Waste-Based Energy** conference is your opportunity to get the latest information about the waste-to-energy industry in Canada and abroad.

Attend this event and learn about all the key steps to ensure your EFW facility operates successfully. Be informed about the latest technologies, learn about the regulatory framework behind successfully implementing EFW projects and explore your financing options, including:

- » Ways to interact with the public to ensure your proposed facility gains community acceptance
- » Developing thorough risk assessments to mitigate potential health hazards associated with your EFW facility
- » Building a solid business case for your EFW facility and negotiating contracts
- » Discovering your financing options, including investment and revenue opportunities in this economic climate
- » Learning about cutting-edge technologies that will help you cut costs and increase your bottom line
- » Exploring international strategies on waste-based energy projects and ways to incorporate them into Canada

Connect with other like-minded individuals in the waste to energy space. Join your colleagues and competitors on November 23rd and 24th, 2009 at the Intercontinental Toronto Yorkville. Register today by calling **1-877-927-7936** or book online at **www.CanadianInstitute.com/wbe**.

Who You Will Meet

Directors of Public Works	Gasification Technology Companies
Municipal/Commercial Waste Managers	Regional Power Authorities
Landfill Owners and Operators	Chief Financial Officers of Energy Companies
EFW Technology Providers	Head of Infrastructure
Environmental Lawyers, Consultants and Engineers	Head of Planning and Strategy
Regional, Provincial and Federal Departments of Environment and Energy	Waste Policy Officers

Sponsorship & Exhibition Opportunities

Maximize your organization's visibility in front of key decision-makers in your target market. For more information, contact **Director Business Development, Daniel Gellman** at **416-927-0718** ext. **389**, toll-free **1-877-927-0718** ext. **389** or by email at **d.gellman@CanadianInstitute.com**

Michael Cant

Associate, Senior Solid Waste Planner
Infrastructure Sector Leader, Golder Associates Ltd.

Ken Carrusca

Residuals Management Division Manager
Metro Vancouver

John Foden

Managing Director
Canadian Energy-From-Waste Coalition (CEFWC)

Marvin Hunt

Chair
Metro Vancouver Waste Management Committee

John Jackson

Coordinator
Citizens' Network on Waste Management

Mirka Januszkiewicz

Director of Waste Management Services
The Regional Municipality of Durham

Mike Lepage

Principal, Certified Consulting Meteorologist
RWDI

John Lindemann

Senior Manager for Business Development
Wheelabrator Technologies

Jim McKay

Senior Associate, Practice Leader, Solid Waste Services, Stantec

Chuck Martin

President
Bio-en Power Inc.

Kevin Matthews

President
Canada Composting Inc.

Wes Muir

Director, Corporate Communications
Waste Management Inc.

Joey Neuhoff

Director of Business Development
Covanta Energy Corporation

Dr. Christopher Ollson

Principal and Environmental Health Scientist
Stantec

Guy Piazza

Managing Director
Parlo Capital

Thomas Rand

Director of Waste-to-Energy Division
Ramboll, Denmark

Jeff Surma

CEO
S4 Energy Solutions LLC

Nickolas J. Themelis

Director, Earth Engineering Center
Earth and Environmental Engineering
(Henry Krumb School of Mines)
Columbia University

John Tidball

Certified Specialist (Environmental Law)
Miller Thomson LLP

Darryl Yahoda

Manager, Generation Procurement
Ontario Power Authority

Confirmed Speaker

Linde North America Inc.

Register at 1-877-927-7936 or in Toronto 416-927-7936 or www.CanadianInstitute.com/wbe

8:00 Registration and Coffee Served ☺

9:00 Opening Remarks from the Conference Chair

Nickolas J. Themelis

Director, Earth Engineering Center
Earth and Environmental Engineering (Henry Krumb School of Mines) Columbia University

9:15 Critical Elements Involved in Planning an Energy From Waste (EFW) Facility

Jim McKay

Senior Associate, Practice Leader, Solid Waste Services
Stantec

- How to start establishing an EFW facility
- Where to start in establishing an EFW facility
- What are the critical elements involved in planning an EFW facility?
- Ensuring stakeholders understand the needs of the community: communications, consultation and community acceptance
- Identifying key concerns about EFW facilities and how they can be addressed
- How to site a facility and manage risk perception
- Lessons learned from the Durham/York experience in planning an EFW facility

10:00 Highlighting the Current Government Regulations Impacting EFW Projects

John Tidball

Certified Specialist (Environmental Law), Miller Thomson LLP

- Amendments to the Waste Diversion Act (WDA) 2002 and its effects on EFW initiatives
- Update on current regulations and guidelines under Ontario's Environmental Assessment Act and Environmental Protection Act
- Understanding the potential effects of zero waste-based legislative reform on EFW initiatives
- Analyzing the Environmental Assessment Act and its effects on EFW facilities ☺
- The impact of the Green Energy and Green Economy Act on EFW projects

10:45 Networking Coffee Break

11:00 Mitigating Negative Public Perception of EFW projects

Wes Muir

Director, Corporate Communications, Waste Management Inc.

John Lindemann

Senior Manager for Business Development
Wheelabrator Technologies Inc.

John Jackson

Coordinator, Citizens' Network on Waste Management

One of the most crucial elements of a successful EFW project is acceptance by the public. Negative public perception is an underlying cause of concern for EFW companies. This session will help you gain buy-in from the local community.

- Examining the latest public opinion research and impact on EFW projects
- What are the concerns of citizen activists about EFW projects?
- How to generate greater public awareness and acceptance of EFW projects
- Assessing EFW projects in relation to other waste diversion options
- Ways to consider public concern about EFW projects and incorporate them into your business case

- What are public concerns about risk assessments and methods by which risks are communicated?
- Conducting thorough health risk assessments to address fears about potential health hazards
- How to communicate effectively to dispel public concern about waste issues
- How to involve the public in decision-making around waste management options

12:15 Networking Luncheon for Speakers and Delegates 

1:30 Understanding the Cost-Benefit Analysis of the Durham-York Multi-Million Dollar Incinerator

Mirka Januszkiewicz

Director of Waste Management Services
The Regional Municipality of Durham

Joey Neuhoff

Director of Business Development
Covanta Energy Corporation

After years of considering building a waste to energy plant, to convert the city's waste into energy, Durham Regional Council has given approval to build an incinerator in Clarington. The plant will process up to 140,000 tonnes of garbage a year and convert it into energy. Covanta was chosen as the preferred vendor for the incinerator.

- Updates on the York-Durham project
- How did the region incorporate public views on the proposed project?
- Learn about the approval process for building an incinerator
- What factors did Durham consider before buying the incinerator from Covanta Energy?
- What challenges did Durham encounter and how did it overcome them?
- Lessons learned from this project

2:30 Maximize ROI on Waste Through Cutting Edge Plasma Gasification Technologies

Jeff Surma

CEO, S4 Energy Solutions LLC

- Looking at the latest gasification technologies and determining which ones meet your company's objectives
- Evaluating the environmental impact of gasification technologies in relation to other waste management options
- Analyzing the various technologies in terms of energy maximization – ones which generate the most energy and have low operational costs
- Examining cost considerations for gasification technologies and how to assess the best option
- Applications of this technology to municipal solid waste development in North America

3:15 Refreshment Break

3:30 Complying with Permitting Regulations to Ensure Successful Development of EFW Facilities

Michael Cant

Associate, Senior Solid Waste Planner
Infrastructure Sector Leader, Golder Associates Ltd.

- Update on current waste to energy plant guidelines under Ontario's Environmental Assessment Act and Environmental Protection Act
- Ensuring your plant meets permitting requirements
- Step-by-step guide to ensure your proposed facility meets and exceeds environmental regulations
- Situating EFW within the hierarchy of other waste diversion options
- How to effectively manage by products of your plant to ensure your facility gains public acceptance and meets regulatory requirements
- Challenges and obstacles involved in acquiring permits

CASE STUDY

4:15 **Understanding Ontario Power Authority's View on Generating Electricity from Waste and the Financial Value of Corporate Sustainable Development**

Darryl Yahoda

Manager, Generation Procurement, Ontario Power Authority

Blair Feltmate

Director Sustainable Development
Ontario Power Generation

- Ontario Power Authority's (OPA) history and role in Ontario's electricity sector
- OPA initiatives for Waste Based Energy projects
 - Challenges in procuring electricity from Waste Based Energy projects
 - Types of Waste Based Energy projects that the OPA currently has initiatives for
 - OPA procurement processes and contract options for Waste Based Energy Projects
- Highlighting the paybacks of having a corporate sustainable policy in your company
- Knowing how to plan and profile your sustainable development message
- Discovering why corporate sustainable development adds to your company's reputation.

5:15 **Chair's Recap and Conference Adjourns**

DAY 2: Tuesday, November 24, 2009

8:30 **Coffee Served ☕**

9:00 **Opening Remarks from the Conference Chair**

9:15 **Examination of Innovative Uses of Biogas for Conversion into Energy**

Chuck Martin

President, Bio-en Power Inc.

Kevin Matthews

President, Canada Composting Inc.

- Overview of the new bio-gas facility
- Economics advantages of anaerobic digestion
- First hand knowledge of cost savings that were achieved and analysis of environmental impact of bio gas over other forms of emissions
- Managing the environmental implications of the facility under construction
- Incorporating regulatory guidelines into the plans when developing bio gas plants
- How was the public approval process managed?

10:15 **Networking Coffee Break ☕**

10:30 **International Strategies on Waste to Energy Projects and Ways to Incorporate them into Canada**

John Foden

Managing Director
Canadian Energy-From-Waste Coalition (CEFWC)

Nickolas J. Themelis

Director, Earth Engineering Center
Earth and Environmental Engineering (Henry Krumb School of Mines), Columbia University

Thomas Rand

Director of Waste-to-Energy Division
Ramboll, Denmark

- What aspects of the European model can be adopted in Canada?

- What technologies are leading international EFW companies using?
- Lessons learned from the Europeans.
- How have the Europeans been successful in dealing with public objection?

12:00 **Commercial Viability and Investment Opportunities of Waste to Energy Projects**

Guy Piazza

Managing Director, Pario Capital

As the world's population is increasing and concern about green initiatives rising, there is significant opportunity for waste based projects in North America and abroad. This session explores the economic viability of EFW facilities and ways to secure funding for these projects.

- Examining the economic viability of EFW plants in 2009 and beyond
- Analyzing the key strategies for identifying and securing equity for EFW plants in a credit starved environment
- What impacts investors and lenders' decisions to invest in waste-to-energy plants?
- Ways to successfully partner with investors and lenders to secure optimum funding for EFW facilities
- What are the expected financial returns on waste to energy projects?
- What is the typical life cycle of waste to energy projects?
- What is the future viability of the EFW industry in North America and abroad?

12:45 **Networking Luncheon for Speakers and Delegates **

2:00 **Practical Challenges and Opportunities in the Municipal Field: The Metro Vancouver Experience to Date**

Ken Carrusca

Residuals Management Division Manager, Metro Vancouver

Marvin Hunt

Chair, Metro Vancouver Waste Management Committee

Metro Vancouver is planning to build six new waste-to-energy plants to deal with the problem of excess garbage and not enough landfill space.

- How did Metro Vancouver incorporate public input on the proposed facilities?
- What factors did Vancouver deem critical before planning these waste-to-energy facilities?
- How did it deal with negative public perception around waste-to-energy facilities?
- What steps did Metro Vancouver take with respect to the approval process of EFW facilities
- What are the challenges Metro continues to encounter with respect to EFW facilities?

3:00 **Learn how to Produce Liquid Natural Gas (LNG) from Waste: A Cost Effective and Environmentally Friendly Alternative to Diesel Fuel**

Confirmed Speaker

Linde North America Inc.

- The start up costs in engineering designing, manufacturing and installation of LNG plants
- Benefits of Liquid Natural Gas over other forms of fuel in terms of carbon credit emissions
- A cost effective alternative for producing diesel fuel (selling LNG to fleets is cost effective)
- Commercial benefits of producing LNG from landfills
- Learn about the latest technologies in the waste to LNG space
- Learn about the depth and scope of the market for LNG products

CASE STUDY

INTERNATIONAL PANEL

3:45 **Waste to Energy Projects - Impact on Air Quality and Analysis of Potential Health Hazards of EFW Emissions**

Dr. Christopher Ollson

Principal and Environmental Health Scientist, Stantec

Mike Lepage

Principal, Certified Consulting Meteorologist, RWDI

Though an EFW facility may be desired in your overall solid waste plan one must address the potential health hazards of EFW air emissions prior to gaining regulatory approval. The key to ensuring regulatory acceptance for an EFW facility lies in ensuring that the chemical emissions from your facility will not endanger human or ecological health. In many cases considerable public outreach and risk communication will be required to educate the public how properly designed and maintained facilities would be unlikely to impact their health. Learn about regulatory and technical requirements pertaining to HRA's – necessary to gain regulatory approval for running an EFW facility in Canada.

- Discussion of public concerns and perceptions of health risks related to EFW emissions
- Developing an appropriate risk assessment scope to meet regulatory requirements
- What chemical emissions need to be considered
- How to conduct thorough risk assessments
- Appropriate mitigation and monitoring that can be considered
- Brief overview of Reg. 419/05 air quality compliance requirements: estimating emissions; dispersion modeling and assessing against standards
- Reg. 419/05 versus precautionary approaches, cumulative effects, ecosystem approaches, the relationship between them, and the relevance for EFW facilities
- Assessing the human health risk assessment and relationship to Reg. 419/05: evaluating baseline conditions, cumulative effects and net effects; inhalation and other exposure pathways (deposition to soils/water/vegetation)
- Examining Reg. 419/05 standards versus health reference levels, and incremental risks
- Simplifying the analysis: screening out negligible contaminants and the relevance to EFW facilities

4:45 **Chair's Recap and Conference Adjourns**



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9:00-12:30 p.m. (Registration opens at 8:30 a.m.)

Interactive Learning Session:
**Health Risk Assessment and Evaluation
for Energy-From-Waste Projects**

Workshop Leader:

Dr. Christopher Ollson

Director – Environmental Health Sciences, Stantec

Critical to regulatory success in any jurisdiction is a thorough understanding of how chemical emissions from an EFW project have the potential to impact public and environmental health. Although EFW technology is emerging as an alternative for waste management in Canada, the general public often does not have a good understanding how new facilities, are operating in a safe manner around the world.

The need to demonstrate that chemical emissions from your proposed facility will not have an impact on human or ecological health has become integral to the Environmental Assessment process in Canada. The next step in the process is developing a cost-effective, yet scientifically defensible, environmental surveillance plan to be implemented upon commissioning the facility.

This session will focus on the regulatory and technical requirements for conducted health risk assessments in support of siting, gaining regulatory approval, and environmental surveillance for operating an EFW facility in Canada.

Attend this half-day workshop and learn:

- An overview of potential health risks and concerns related to EFW emissions
- Risk assessment fundamentals
- To make the linkages between air modeling and health risk assessment
- Importance of baseline data collection
- How to mitigate potential health risks
- Current developments in environmental surveillance of EFW facilities around the world
- Approaches to public and stakeholder consultation

Register early to reserve your spot!

Christopher Ollson, Ph.D. is Director of Environmental Health Sciences for Stantec. He is recognized by the Ontario Ministry of the Environment as a Qualified Person Risk Assessment and as a Qualified Toxicologist through the Air Standards Development Branch.

Throughout his career, Dr. Ollson has led numerous multidisciplinary environmental health assessments and facilitated community consultation and risk communication for both industry and government agencies across Canada and internationally.

The Canadian Institute's Green Initiatives: What are we doing to reduce the environmental impact of hosting conferences across Canada?

EFFORTS

- ✓ We print all brochures with **The Canadian Institute's** Environmentally Tri-Certified (FSC, PEFC, SFI) Print Partner
- ✓ We have reduced paper print and use by more than 25% over the past year
- ✓ We provide webcast options for individuals unable to travel to our events
- ✓ We encourage our delegates to recycle their conference badges

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- ✓ We also work very closely with all conference venues to reduce, reuse and recycle

Register at 1-877-927-7936 or in Toronto 416-927-7936 or www.CanadianInstitute.com/wbe

November 23-24, 2009 | Intercontinental Toronto Yorkville, Toronto

The Canadian Institute presents

Waste-Based Energy

Capitalizing on Opportunities in Energy Recovery and Gas Capture from a Range of Industrial Waste

Top Reasons to Attend

- ✓ Learn about ways to secure funding for EFW facilities in a credit starved environment
- ✓ Network with top practitioners in the waste-to-energy space
- ✓ Hear from municipalities about their waste-to-energy initiatives
- ✓ Explore international perspectives on waste-based energy projects
- ✓ Maximize your company's bottom line by implementing EFW projects

REGISTRATION FORM

To expedite your registration, please mention your Priority Service Code

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1329 Bay Street
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YES! Please register the following delegate for Waste-Based Energy

For group discounts please call 1-877-927-7936

FEE PER DELEGATE	Register & Pay by October 26, 2009	Register & Pay after October 26, 2009
<input type="checkbox"/> Conference Only	\$1895 + 5% GST = \$1989.75	\$2095 + 5% GST = \$2199.75
<input type="checkbox"/> Conference + Interactive Learning Session	\$2390 + 5% GST = \$2509.50	\$2590 + 5% GST = \$2719.50
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STEP 1

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NAME	POSITION	
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TELEPHONE	FAX	
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TYPE OF BUSINESS	NO. OF EMPLOYEES	
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STEP 2

PAYMENT

Please charge my VISA MasterCard AMEX

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Wire Transfer (\$CAD)

Please quote the name of the attendee(s) and the conference code 371V10 as a reference.

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Conference participants will receive a comprehensive set of conference materials prepared by the speakers, as an excellent reference source after the conference. If you have paid and are unable to attend, the conference materials will be shipped to you upon request only. Request must be received within 30 days upon conclusion of the conference.

Payment Policy

Payment must be received in full by the conference date to ensure admittance. All discounts will be applied to the Conference Only fee (excluding add-ons), cannot be combined with any other offer, and must be paid in full at time of order. Group discounts available to individuals employed by the same organization.

Cancellation and Refund Policy

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