Canadian Energy-From-Waste Coalition

"Current Status of the Canadian Industry"

Presentation to WTERT

Columbia University, New York

17 October 2008

Agenda

Canadian Energy-From-Waste Coalition

- Language Matters
- A Convergence of Needs
- Organizational Background
- Lay of the Land
- Setting the Record Straight
- Progressive Public Attitudes
- Evolving Issues, Emerging Opportunities

Perception Is Everything

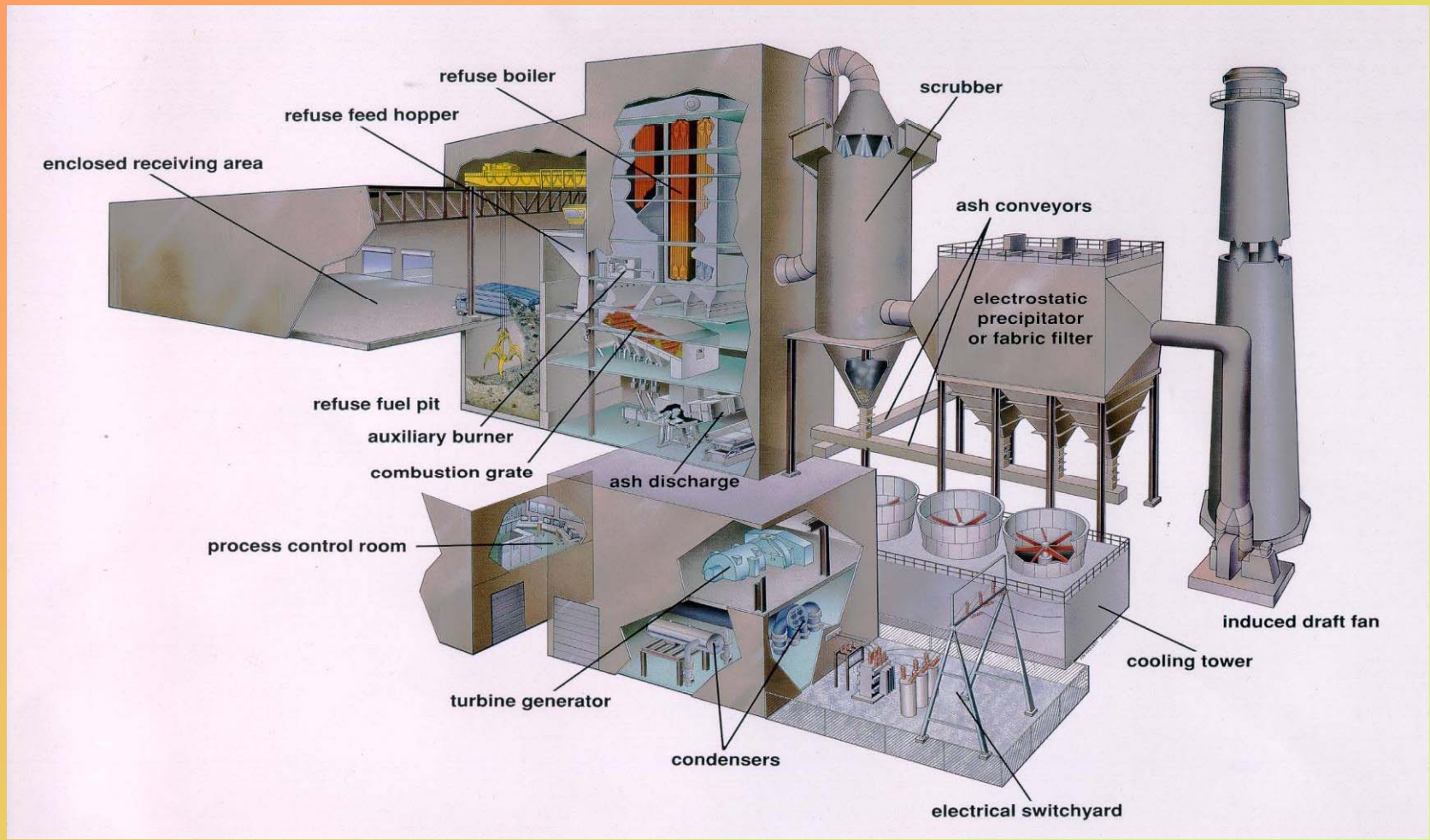
Language Matters

- Energy-from-Waste/Waste-to-Energy
  - "Volatile" and "Controversial" evoke unfair imagery
  - "Proven" and "Reliable" present accurate portrayal
- Name-calling
  - Incinerators
    - Only attempt to reduce volume of garbage
    - Usually install rudimentary pollution control equipment
  - EFW
    - Employs maximum achievable control technology (MACT)
    - Utilize high temperature to extract energy from trash

An Out-Of-Date Sterotype

A Modern EFW Facility

State-of-the Art Technology



Situational Imperative

Converging Needs

- Municipalities face an unprecedented waste management crisis related to capacity shortfall and risk of a border closure
- Escalating costs of conventional fossil fuels sparking interest in alternative energy sources
- Overwhelming scientific evidence validates EFW value proposition
- Strong public opinion polling shows growing support for EFW
- EFW can enhance supply mix option and address power supply shortage
- Prudent planning dictates investigation of all options in an integrated system

Canadian MSW Trends

Year	Total Disposal (kg/capita)	Annual Change	Total Diversion (kg/capita)	Annual Change	Total Generation (kg/capita)	Annual Change	Diversion Rate
1996	697		176		873		20%
1998	688	-1.31%	222	20.72%	926	5.72%	24%
2000	753	8.63%	199	-11.56%	952	2.73%	21%
2002	769	2.08%	212	6.13%	980	2.86%	22%
2004	791	2.78%	246	13.82%	1,037	5.50%	24%
Overall Change (1996-2004)		11.88%		28.46%		15.81%	

EFW and Recycling

Country	Diversion (per cent of total)	Landfill (per cent of total)	Incineration (per cent of total)	Waste per capita (kg)
Netherlands	65	3	32	624
Austria	59	31	10	627
Germany	58	20	22	600
Belgium	52	13	35	469
Sweden*	44	5	50	464
Denmark	41	5	54	696
Luxembourg	36	23	41	668
Spain	35	59	6	662
Ireland	31	69	0	869
Italy	29	62	9	538
Finland	28	63	9	455
France	28	38	34	567
Canada	24	74	2	1,037
UK	18	74	8	600
Greece	8	92	0	433
Portugal	3	75	22	434

Source: Institute for Public Policy Research, base yr: 2003/4, Environment Canada (2004) * 2005

From: Magnus Schonning, Embassy of Sweden; Carl Lilliehöök, Waste & Recycling, Tekniska Verken AB, Linköping Sweden

Mission Statement

Converging Needs

"The Canadian Energy-From-Waste Coalition, an organization of industry, associations, and stakeholders committed to sustainable environmental policies, stands for the promotion, adoption, and implementation of ER/EFW technology for the management of residual materials within the context of an integrated solid waste management system. Recognizing that ER/EFW technologies are compatible with proactive recycling and other diversion efforts, the coalition seeks to promote the merits of the thermal treatment of waste and garner support for waste derived fuels."

Coalition Principles

Organization Background

- *Social Sustainability*
  - Operate within the context of local circumstances, preserving community sustainability
- *Environmental Sustainability*
  - Reduce overall environmental burden by complementing, not competing with, recycling and diversion programs
- *Economic Sustainability*
  - Balancing costs and benefits most advantageous and acceptable to end-users, customers, and host communities

Organizational Matrix

Municipalities	Labour	Emerging Tech
Equipment	Industry	Academia
Construction	Diplomats	Engineers
Lawyers	Real Estate	Operators

Membership Matrix

Vancouver, Peel, Edmonton, Hamilton, Hamilton Utilities	Power Workers Union	AlterNRG
AE&E VonRoll	Cement & Plastics	WTERT
Maple Reinders	Sweden, Italy, Netherlands, Denmark, France, Germany, Spain	Golder Associates, GENIVAR, EarthTech, Willis Energy, Ramboll
Borden Ladner Gervais, Willms & Shier	Aquilini Renewable Energy	Covanta, Veolia, Wheelabrator/WMI

Category One:
Principal Members, Owners + Operators

Lay of the Land

- Covanta, Veolia ES, Wheelabrator/WMI
  - Industry leaders assuming rightful place in an emerging market
  - Convergence of crisis and opportunity
  - Recognized multiple large municipalities with an interest
  - Provincial preference for state-of-the art technology solution
  - Essential political role as proactive defenders of model in public forum
  - A public policy legacy for future generations

Category Two: Entrepreneurs, Associations, Investors

Lay of the Land

- Key industry associations provided kick start
  - Cement Association of Canada: Feedstock
  - Canadian Plastics Industry Association: Recovery rates
- Canada's leading law firms
  - Borden Ladner Gervais: Energy
  - Willms & Shier: Environment
- Promoting diversified, viable, sustainable power generation
  - Power Workers Union
- Integrating technology into a long-term view
  - AlterNRG
- Carving a niche and establishing an early presence
  - Maple Reinders
- Achieving independent awareness
  - AEE VonRoll
- Driving strategy by understanding the national market
  - Aquilini Renewable Energy

Category Three: Engineers + Consultants

Lay of the Land

- Golder Associates, GENIVAR, EarthTech, Willis Energy
  - Keeping it real
  - Managing the hyperbole
  - Stay informed, up-to-date
  - Staying the course in the face of public criticism

Category Four: Municipalities

Lay of the Land

- Metro Vancouver, Peel Region, City of Edmonton, City of Hamilton, Hamilton Utilities
  - Streamlined environmental assessment
  - Opening of energy market for LDCs
  - Attain support on options, without compromising decision-making
  - Stay informed, connected
  - Accept one-way channel of communication
  - Forcing coalition into role of credible partner

Initiatives

Setting the Record Straight

- Organizing position
- Recruiting new members
- Raising association profile
- Building government relationships
- Engaging key stakeholders, audiences
- Developing, maintaining website
- Pursuing a standard offer program
- Educating media in national campaign
- Participating in technology peer review

A Cold Shower

Setting the Record Straight

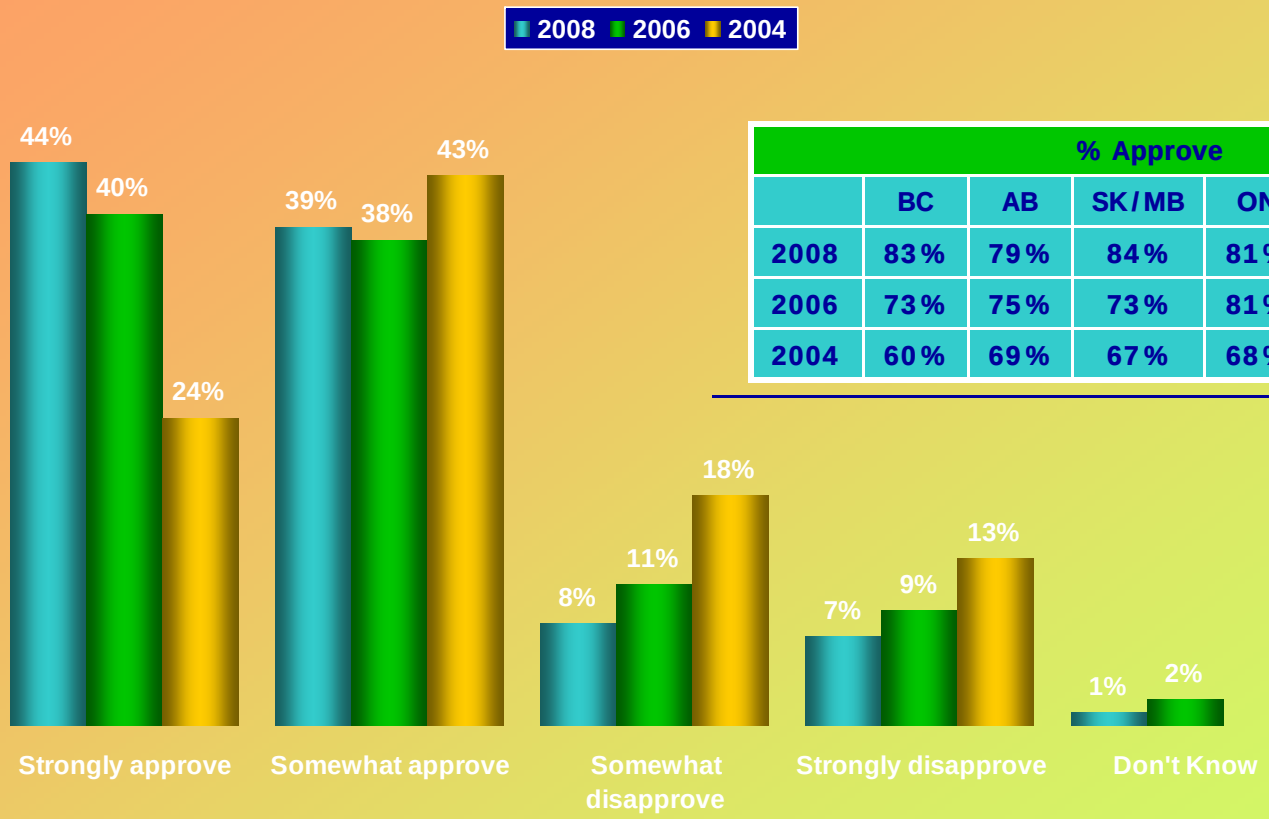
Public Opinion

Progressive Public Attitudes

- Research shows 83% of Canadians support EFW technologies, up from 67% only four years ago
- Canadians understand that EFW can help preserve natural resources and reflects a preferred disposal option
- Among those who approve of facilities being built, more than half (58%) would also approve construction of such a facility in their immediate community

Using 'Waste to Energy Facility' Increases Approval 5 points Nationally…+11 Points in Quebec and +10 in BC…From 2004: Up 16 Points…

2008: 83% 2006: 78% 2004: 67%



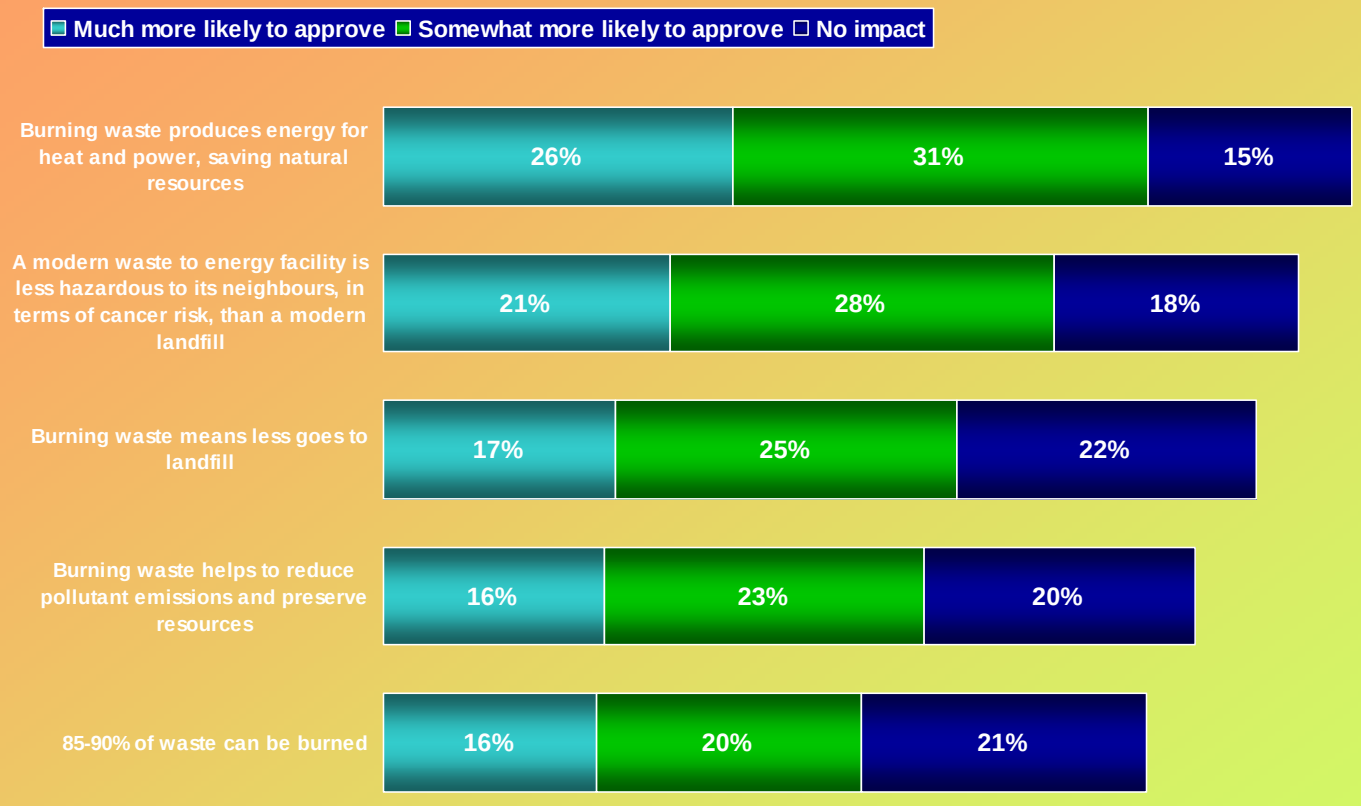
% Approve						
	BC	AB	SK/MB	ON	QUE	ATL
2008	83%	79%	84%	81%	91%	74%
2006	73%	75%	73%	81%	80%	69%
2004	60%	69%	67%	68%	69%	64%

NOTE: In the 2008 wave, 'waste to energy facility' replaced 'incinerator' in questionnaire.

Thinking about this and the other options available, do you approve or disapprove of waste to energy facilities being used for garbage disposal and management in your province? Is that strongly or somewhat? Base: 2004 All respondents N=1,806, 2006 N=2,750, 2008 N=1,652

Source: Waste Management Inc. (Research by IPSOS Reid)

Most Effective Message to Move to "More Likely to Approve" is Burning Waste Saves Natural Resources and a Modern Facility is Less Hazardous to its Neighbors than a Landfill…

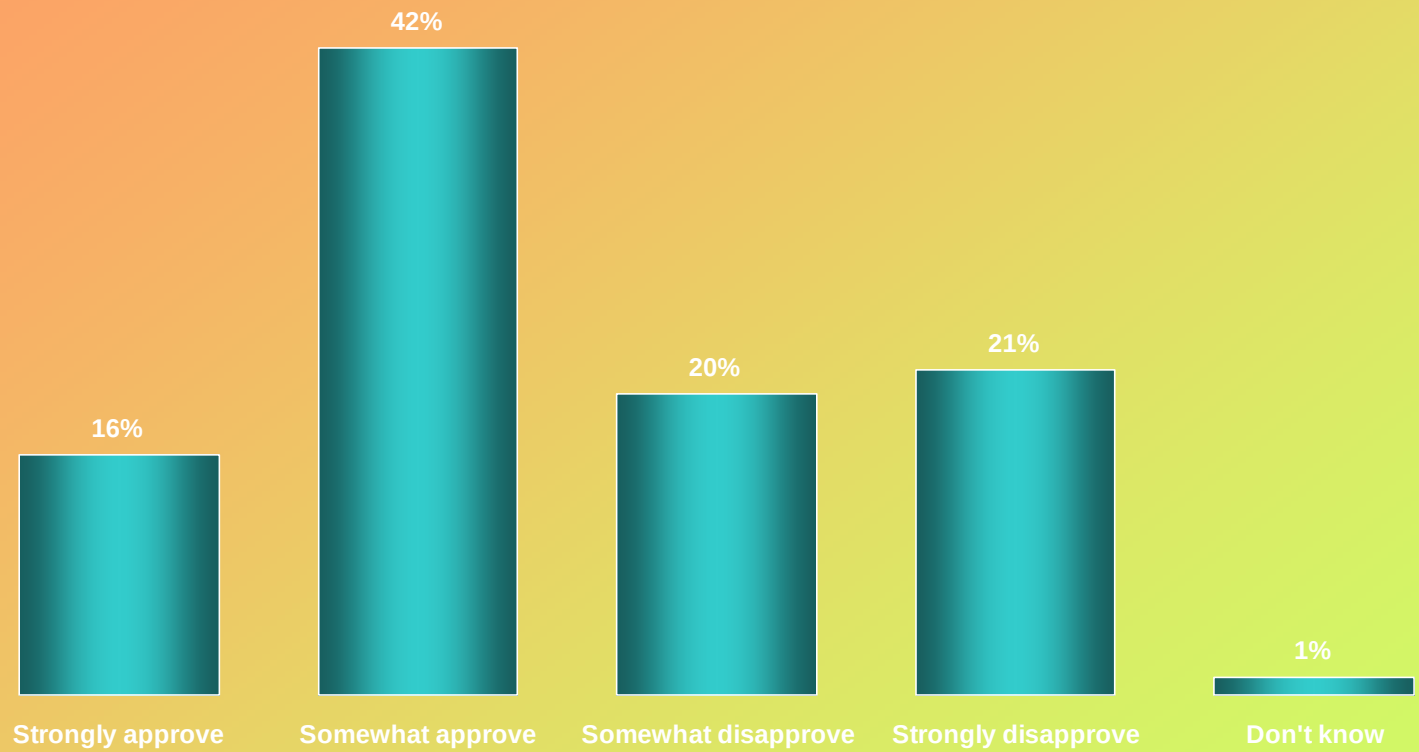


NOTE: In the 2008 wave, 'waste to energy facility' replaced 'incinerator' and 'burning' replaced 'incineration' in questionnaire.

I am now going to read you some things that may be said about waste to energy facilities. Please tell me whether after hearing each statement you are more or less likely to approve of waste to energy facilities being used for garbage disposal and management, or whether the statement has no impact on your opinion? Base: Do not approve/don't know of incinerators being used for garbage disposal N=278

Source: Waste Management Inc. (Research by IPSOS Reid)

Among those who Approve of EFW Facilities being Built, More than Half (58%) Would also Approve the Construction of such a Facility in their Immediate Community…



How would you feel about a waste to energy facility being built in your immediate community? Would you strongly approve, somewhat approve, somewhat disapprove, or strongly disapprove? Base: All respondents that said 'Strongly Approve' or 'Somewhat Approve' at Q15 2008 N=1,375

Source: Waste Management Inc. (Research by IPSOS Reid)

A Sustainable Solution…

Issues & Opportunities

- Solid public support for proven technologies
- Municipalities can manage waste and generate energy locally, in their own backyard
- Potential for distributed generation, district heating/cooling
- Regional operations offer economies-of-scale consistent with Smart Growth planning policies
- Tough emissions standards with transparent reporting, including on-line and on-site disclosure
- Stringent regulations assure accountability and responsible operations
- Performance measures to guide improvements and investments

Communities Considering EFW

Issues & Opportunities

- ✓ Durham-York Region (1.1 million)
- ✓ Hamilton (500,000)
- ✓ Peel Region (600,000)
- ✓ Sault-Ste. Marie (70,000)
- ✓ Ottawa (1 million)
- ✓ Dufferin County (60,000)
- ✓ Edmonton (1 million)
- ✓ Montreal (1.8 million)
- ✓ Metro Vancouver (1.5 million)

John P. Foden

Executive Director

Canadian Energy-From-Waste Coalition

10 Rambert Crescent

Toronto, Ontario M6S 1E6

Phone: (416) 763-0815

E-Mail: jpfoden@presterjohn.ca

www.energyfromwaste.ca