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"The State of EFW in Canada: An Overview of Policy Options and Political Challenges"

Presentation to 5th Congress of the Confederation of European Waste-to-Energy Plants (CEWEP)

Antwerp, Belgium

1 July 2010

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Happy Canada Day!

1 July 2010 - Celebrating 143 years of Confederation

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Agenda

- Canada 101
- Canadian Waste Market
- EFW Then and Now
- Case Studies
- Coalition Building, Advocacy, Education
- Government Initiatives
- Projects In Development
- Lessons Learned
- Progressive Public Attitudes
- Two Years From Today

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Canada 101

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World View

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Continental Perspective

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Canadian Demographic

- **Area**
  - **Land area:** 3,511,003 sq mi (9,093,507 sq km)
  - **Total area:** 3,855,102 sq mi (9,984,670 sq km)
- **Population (2008 est.):** 33,679,263
  - **Density per sq km:** 3.7
  - **Growth rate:** 0.8%
  - **Birth rate:** 10.7/1000
  - **Infant mortality rate:** 4.5/1000
  - **Life expectancy:** 80.4
  - **Literacy rate:** 99% (2003 est.)
- **Languages:** English 59.3%; French 23.2% (both official); other 17.5%
- **Ethnicity/Race:** British Isles origin 28%; French origin 23%; other European 15%; indigenous Indian and Inuit 2%; other (mostly Asian, African, Arab) 6%; mixed background 26%
- **Religions:** Roman Catholic 43%; Protestant 23% (including United 10%, Anglican 7%, Baptist 2%, Lutheran 2%); other Christian 4%; Muslim 2%; none 16% (2001)

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Canadian Economy

- **GDP/PPP** (2007 est.): $1.266 trillion; per capita $38,400
- **Real growth rate:** 2.7%
- **Inflation:** 2.1%
- **Unemployment:** 6%
- **Arable land:** 5%
- **Agriculture:** wheat, barley, oilseed, tobacco, fruits, vegetables; dairy products; forest products; fish
- **Labor force:** 16.3 million (Dec. 2005); agriculture 2%, manufacturing 14%, construction 5%, services 75%, other 3% (2004)
- **Industries:** transportation equipment, chemicals, processed and unprocessed minerals, food products, wood and paper products, fish products, petroleum and natural gas
- **Natural resources:** iron ore, nickel, zinc, copper, gold, lead, molybdenum, potash, diamonds, silver, fish, timber, wildlife, coal, petroleum, natural gas, hydropower
- **Exports:** $364.8 billion f.o.b. (2005 est.): motor vehicles and parts, industrial machinery, aircraft, telecommunications equipment; chemicals, plastics, fertilizers; wood pulp, timber, crude petroleum, natural gas, electricity, aluminum
- **Imports:** $317.7 billion f.o.b. (2005 est.): machinery and equipment, motor vehicles and parts, crude oil, chemicals, electricity, durable consumer goods
- **Major trading partners:** U.S., Japan, UK, China, Mexico (2004)
- **Communications: Telephones:** main lines in use: 19,950,900 (2003); mobile cellular: 13,221,800 (2003); **Internet hosts:** 3,210,081 (2003); **Internet users:** 16.11 million (2002).
- **Transportation: Railways:** total: 48,683 km (2004). **Highways:** total: 1.408 million km; paved: 497,306 km (including 16,900 km of expressways); unpaved: 911,494 km (2002). **Waterways:** 631 km; note: Saint Lawrence Seaway of 3,769 km, including the Saint Lawrence River of 3,058 km, shared with United States (2003). **Airports:** 1,326 (2004 est.)

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Canadian Waste Market

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Critical Market Numbers

- 35 m tonnes handled by waste industry
  - 22m tonnes from non-residential sources
    - +11% from 2004-2006
  - 13 m tonnes from residential sources
    - +3% from 2004-2006
- 27 m tonnes to disposal
  - +8% from 2004-2006
  - 74% to landfill
  - 3% to "incineration," including EFW
- 7.7 m tonnes diverted (22%)

- Per capita performance
  - 1,072 kg of waste per capita
  - 793.3 kg to landfill
  - 32.2 kg to "incineration"
  - 237 kg diverted

Source: Statistics Canada, Waste Management Industry Survey, 2006

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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	-1.29%	222	26.14%	926	6.07%	24%
2000	753	9.45%	199	-10.36%	952	2.80%	21%
2002	769	2.12%	212	6.53%	980	2.94%	22%
2004	791	2.86%	223	5.19%	1,037	5.81%	22%
2006	835	5.56%	237	6.28%	1,072	3.38%	22%
Overall Change (1996-2006)		19.80%		34.70%		22.80%	

Source: Statistics Canada, Waste Management Industry Survey, 2006

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Trends By Sector

	Category	Measure	2000	2002	2004	2006	% Chg '00-'06
	Population	(m)	30.8	31.4	31.9	32.6	6%
Municipal Solid Waste							
	Generation	Tonnes (m)	29.3	30.7	32.3	35	19%
		Kg/Capita	952	980	1,037	1,072	13%
	Disposal	Tonnes (m)	23.2	24.1	25.2	27.2	17%
		Kg/Capita	753	768	791	835	11%
	Diversion	Tonnes (m)	6.1	6.6	7.1	7.5	23%
		Kg/Capita	199	212	223	237	13%
		% Diversion	21	22	22	22	1%
Residential							
	Generation	Tonnes (m)	11.2	12.2	12.3	13	16%
		Kg/Capita	365	390	385	398	9%
	Disposal	Tonnes (m)	9.1	9.4	9	9.2	1%
		Kg/Capita	295	301	280	283	-4%
	Diversion	Tonnes (m)	2.2	2.8	3.4	3.7	68%
		Kg/Capita	71	89	105	115	62%
		% Diversion	19	23	27	29	10%
Non-Residential							
	Generation	Tonnes (m)	18.1	18.5	20	22	21.50%
		Kg/Capita	587	589	626	674	15%
	Disposal	Tonnes (m)	14.1	14.6	16.3	18	28%
		Kg/Capita	458	467	508	552	20.50%
	Diversion	Tonnes (m)	4	3.9	3.7	4	0%
		Kg/Capita	129	123	117	123	-5%
		% Diversion	22	21	19	18	-4%

Source: Alain David, Waste Reduction and Management Division, Environment Canada

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Industry Overview

- Local government
  - Spent an estimated $2.1 billion on waste management in 2006
    - Up from $1.8 billion two years earlier
    - Collection and transportation made up majority of expenditure at $900M
    - Disposal facilities consumed $419M
    - Operation cost of recycling facilities increased by 47% to $171M between 2004 and 2006
  - Operating revenues increased by nearly 16% to slightly more than $1.0B in 2006
    - Tipping fees totaled $194M
  - Capital expenditures declined by $312M, or 16%

- Business sector
  - Revenues increased by 17% to $5.1B from 2004 to 2006
  - Gross operating expenditures increased by 12%, $4.3B, from 2004 to 2006
  - Capital expenditure dropped by 1% to $300M

- Combined
  - Expenditures for 2006 totaled $6.8B
    - 40% increase compared to 2000
  - Waste management industry employed approximately 31,017 people, a drop of 3%
    - Business sector employment down 5% (about 75% of waste workers are in business sector)
    - Government sector employment up 5%

Source: Waste Management Industry Survey: Business and Government Sectors, 2006

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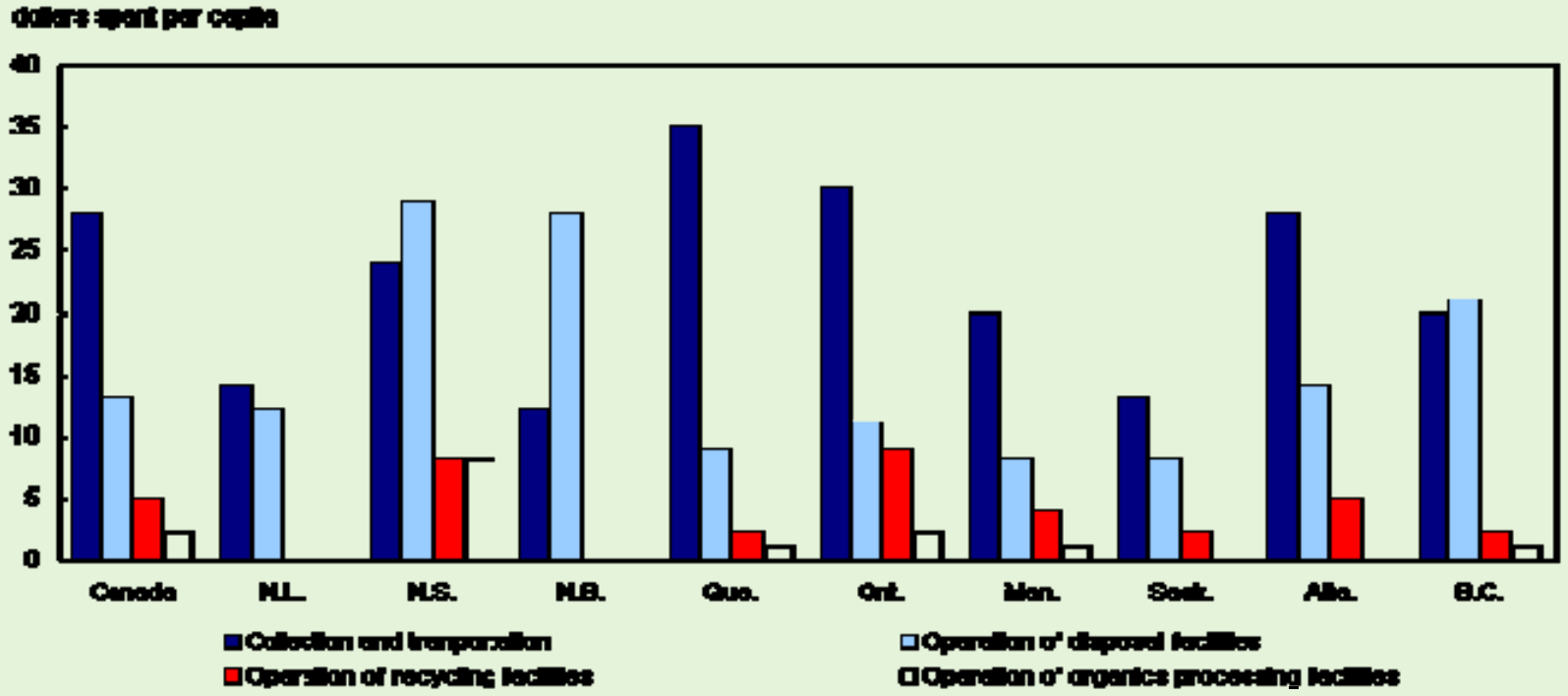
Local Expenditures

Local government expenditures[1] on waste management, 2006

Provinces with municipalities that spent more money per capita on waste management reported diverting greater amounts of waste per person



1. Data for Prince Edward Island, Yukon Territory, Northwest Territories and Nunavut not included in order to meet confidentiality requirements of the Statistics Act.

Source: Statistics Canada, Environment Accounts and Statistics Division

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National Performance…

…In A Global Context

- According to the Conference Board of Canada…
  - Canada's overall environmental performance…
    - 15th out of 17 developed countries
    - "C" grade
  - Canada's waste generation record…
    - "D" grade (Poor performance)
    - Ranks in last place out of 17 countries
    - Behind…Japan, Belgium, Finland, Sweden, France, Italy, Austria, UK, Germany, Netherlands, Switzerland, Austria, Denmark, Ireland, US, and Norway

Source: Conference Board of Canada, "How Canada Performs – Environment Report Card", 3 November 2008; see also www.conferenceboard.ca

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EFW Then and Now

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Current Situation

- **Seven (7) main installations**
  - Five (5) with energy recovery
    - One (1) starved air plant in Prince Edward Island
    - One (1) mass burn plant in Quebec
    - One (1) starved air plant in Ontario
    - One (1) excess air plant in Alberta
    - One (1) mass burn plant in British Columbia
  - Two (2) without energy recovery
    - Two (2) step grate plants in Quebec
  - Range in capacity from 30 tpd to 920 tpd
  - Throughput totals approximately 763,000 tonnes per year
  - Energy generation (steam and electricity) from 96% of combusted waste

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Past Notables

- **SWARU in Hamilton**
  - No RDF facilities still in operation since closure in 2002
  - "While 11 MSW incinerators were included in the (2000) inventory, most of the emissions from this sector were associated with the now closed SWARU facility in Hamilton." (A.J. Chandler & Associates, Report to CCME, December 2006)
- **Ashbridge's Bay (Commissioner's Street) facility in Toronto**
  - Inner city plant closed in 2000
  - Rallying point for opponents, zero-wasters, and downtown residents

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Existing EFW Plants

Canadian EFW Plants and Incinerators, 2000-2005

Type	2000	Waste Quanity (Mg/yr)	2005	Waste Quanity (Mg/yr)
Municipal	11	950,711	7	762,793
Medical	101	5,579	42	8,082
Hazardous	7	163,208	9	204,418
Sewage Sludge	7	171,474	6	172,525
Federal Entities	62	1,235	30	1,087
Remote			22	3,320
Total	188	1,292,207	116	1,152,225

Source: Review of Dioxins and Furans from Incineration in Support of a Canada-wide Standard Review, A.J. Chandler & Associates Ltd., 15 December 2006

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MSW EFW Facilities

Name	Location	Type	Manufacturer	Heat Recovery	Capacity (# x [t/day])	APC System	Annual Thoughput (Mg/
Wainwright (MSW Feed)	Wainright, Alberta	3-stage excess	Basio	Yes	1 x 29	WSH/DS/PAC/FF	2,383
Greater Vancouver RD	Burnaby, BC	Mass burn	Martin	Yes	3 x 240	SNCR/WSH/DS/PAC/FF	275,000
Algonquin Power EFW	Brampton, Ontario	2-stage starved	Consumat	Yes	5 x 100	WSH/DS/FF/PAC/SCR	140,000
Trigen	Charlottetown, PEI	2-stage starved	Consumat	Yes	3 x 33	WSH/DS/PAC/FF	32,000
Centre de traiement des residue urbains	Quebec City, PQ	Mass burn	Von Roll	Yes	4 x 230	ESP/WSH/DS/PAC/FF	280,000
La Regie internumicipale de Gestion Rive Sud	Levis, PQ	Step grate		No	1 x 80	WSH/DS/PAC/FF	24,310
MRC des Iles de las Madelaine	Dune-du-Sud, PQ	Step grate		No	1 x 31	WSH/DS/PAC/FF	9,100

APC System Key

ESP - Electrostatic precipitator for particulate matter removal
WSH - Evaporator cooling tower or wet spray humidifier
DS - Dry reagent addition or dry scrubber
PAC - Powdered activited carbon addition
SNCR - Selective non-catalytic reduction for NOx control
SCR - Selective catalytic reduction for NOx and PCDD/F control
FF - Fabric filter particulate control

Source: Review of Dioxins and Furans from Incineration in Support of a Canada-wide Standard Review, A.J. Chandler & Associates Ltd., 15 December 2006

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Case Studies

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National Overview

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Case Study: Peel Region

- Opened under public ownership in 1992
  - Sold to private investors in 1999
- Five (5) units, 100 tonnes each
  - Rated at 182,000 tonnes/year
  - Operates at 160,000 tonnes/year
- Waste agreement up for renewal in 2012
- EFW a municipal (upper tier) priority
    - Green field opportunity under investigation
    - Consulting work complete
    - Own and operate a critical area of focus
- Willing host but "unwilling" customer
- Selling steam to paper company, Norampac

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Case Study: Burnaby

- Began commercial operation in March 1988
  - Owned by Metro Vancouver (an upper tier municipality)
  - Operates with philosophy of continuous improvement
  - 47 employees
  - First plant in Canada, 2nd in North America with ISO14,000 certification
- Three (3) boiler lines processing approximately 300,000 tons/yr
  - Averaged 94% plant availability over 21 years
  - Past 2 years at 95%
- Processed over 6 million tons of MSW on a 5-acre footprint
- Sold over 8.5 million tons of steam to recycle paper mill
  - Equivalent of 6 million barrels of oil
- Contributed over 700,000 megawatt hours of electricity to provincial grid since July 2003
- Enhanced Metro Vancouver's 55% recycle rate by recovering 185,000 tons of ferrous metal
  - Metro Vancouver landfills have buried over 1 million tons of recyclable steel in the same time frame

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Beautiful Burnaby, BC

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Livable Cities

Nine of the thirteen most livable cities in the world use EFW

Mercer's Quality of Living Survey, 2009

1	**Vienna ***	**Austria**	108.6
2	**Zurich ***	**Switzerland**	108.0
3	**Geneva ***	**Switzerland**	107.9
4	**Vancouver ***	**Canada**	107.4
4	Auckland	New Zealand	107.4
6	**Dusseldorf ***	**Germany**	107.2
7	**Munich ***	**Germany**	107.0
8	**Frankfurt ***	**Germany**	106.8
9	**Bern ***	**Switzerland**	106.5
10	Sydney	Australia	106.3

The Economist's World's Most Livable Cities, 2009

1	**Vancouver ***	**Canada**	98.0
2	**Vienna ***	**Austria**	97.9
3	Melbourne	Australia	97.5
4	Toronto	Canada	97.2
5	Perth	Australia	96.6
5	Calgary	Canada	96.6
7	**Helsinki ***	**Finland**	96.2
8	**Geneva ***	**Switzerland**	96.1
8	Sydney	Australia	96.1
8	**Zurich ***	**Switzerland**	96.1

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Coalition Building, Advocacy, and Education

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Situational Imperative

- 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 ENERGY-FROM-WASTE COALITION

Mission Statement

"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."

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Coalition Principles

- *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

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Organizational Matrix

Municipalities	Labour	Emerging Tech
Equipment	Industry	Academia
W/E Alliances	Diplomats	Engineers
Lawyers	Real Estate	Operators

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Membership Matrix

Vancouver, Peel, Edmonton	Power Workers Union	AlterNRG
AE&E VonRoll	Canadian Cement Association, Canadian Plastics Industry Association	WTERT
ERC, OWMA, SWANA, ASME	Sweden, Italy, Netherlands, Denmark, France, Germany, Spain	Golder Associates, GENIVAR, AMEC, Stantec, Ramboll
Borden Ladner Gervais, Willms & Shier	Aquilini Renewable Energy	Covanta, Wheelabrator/WMI

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Coalition Activities

Education and Promotion

- Raising association profile
- Maintaining website
- Speakers bureau
- Engaging key stakeholders, audiences
  - Outreach to public health officials
- Membership recruitment

Media Engagement

- On-going national campaign
  - Editorial boards
  - Op-ed
  - Rebuttal letters and articles

Government Relations

- Ontario
  - Pursuing standard offer program
  - Advocating for clear emissions standards
  - Participating in technology peer review
- British Columbia
  - Working Group on Waste
  - Municipal relationship building

Project Monitoring

- Advocacy and support
  - Where warranted, needed
  - Where allowed
- Opposition and arguments
  - Getting closer to the truth
  - Correcting the nonsense

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Government Initiatives

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Shared Jurisdictions

- **Jurisdictional Roles**
  - *Municipal*
    - Responsible for the collection, diversion, and disposal of MSW from residential sources
    - Upper and lower tier division of responsibilities
  - *Provincial/Territorial*
    - Movements of wastes within jurisdiction
    - Licensing of generators, carriers and treatment facilities
    - Extended producer responsibility
  - *Federal*
    - International agreements
    - Trans-boundary movements of hazardous waste, hazardous recyclable material, and non-hazardous waste
    - Federal lands and operations

- **Areas of Cooperation**
  - Developing national initiatives
  - Promoting of technical expertise and supporting innovation
  - Gathering statistics, performing analyses, disseminating information
  - Building capacity

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Policy Drivers

- **Convergence of factors**
  - Waste capacity crisis
  - Risk of border closing
  - Need to manage material at home
  - Recognition that zero waste is far off
  - Acknowledgement that technology works
  - Appreciate changing public attitudes

- **Supporting municipal priorities**
  - Without interfering in municipal decision-making
  - Considerable provincial political support at high levels
    - Proven elsewhere
    - Represents innovation
  - Need projects to acquire independent municipal approval
    - Must stand on own merits
    - Leave political risk at local level
  - Implement policies (eg. pricing) to support one-off projects
  - Develop comprehensive position once toehold established

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Setting Priorities

- **Air Emissions Guidelines**
  - Guideline A7 review designed to exceed European standards
  - Tough but manageable
  - Will allow emerging projects to proceed with confidence…
  - While retaining/building/elevating public trust

- **Preferred EFW Pricing**
  - Ontario Power Authority (OPA) set Durham EFW power price at $0.08
    - Good precedent, clear direction in absence of a formal EFW policy
    - Subject to project meeting environmental guidelines on emissions, diversion

    - Need for standard offer program
    - Must recognize EFW as renewable
    - Offer accelerated price for exceeding environmental objectives

- **Streamlined environmental assessment process**
  - Comprehensive analysis and review of alternatives still required
  - But fewer public meetings so it's more cost effective and timely
  - Encourages alternative approaches
  - Involvement of local distribution companies
  - Extensive work undertaken by unregulated energy affiliates

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Tactics vs Vision

Ontario

- **Life Cycle Analysis**
  - Review of landfill gas versus gasification
    - Seeking "plug-and-play" policy tool
  - Theoretical conclusions
    - Proprietary gasification should work
    - But no operational data
  - Province now looking at decision-support parameters

- **Waste Diversion Act**
  - The Good
    - Sympathetic to zero waste lobby
    - Promotes extended producer responsibility
  - The Not-So-Good
    - Does not recognize integrated waste hierarchy
    - Limited definition of diversion to exclude EFW
    - Selective manipulation of case studies
    - Fails to recognize the climate change benefits and energy value of residual waste

British Columbia

- **Working Group on Waste**
  - Coordinated effort to produce vision in multiple policy areas
  - Establish over-arching framework to guide choices
  - Diverse stakeholders in all areas of waste
  - Waste water, project development, landfill, plastics manufacturers, associations (recycling, construction), municipalities

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Projects In Development

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Major Metropolitan Areas

- **Capital (2004 est.)**
  - √ Ottawa, Ontario 1,142,700
- **Largest cities (2004 est.)**
  - ≡ Toronto , Ontario 5,203,600
  - – Montreal, Quebec 3,606,700
  - √ Vancouver, British Columbia 2,160,000
  - √ Edmonton, Alberta 1,101,600
  - – Calgary, Alberta 1,037,100
  - √ Quebec City, Quebec 710,700
  - ↔ Hamilton, Ontario 710,300
  - – Winnipeg, Manitoba 702,400
  - √ Mississauga, Ontario 550,000
  - ↕ London, Ontario 459,700
  - – Kitchener-Waterloo, Ontario 450,100
- **And other up-and-comers**
  - ↔ Durham-York Regions 1,100,000
  - ↔ Southern Alberta 120,000
  - ↔ Sault-Ste Marie 70,000
  - ↔ Dufferin County 50,000

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Case Study: Durham

- **Ten year waste management planning exercise**
  - Shared process (and costs) with York Region
  - Extensive consultation
- **Regional commitment to manage waste locally**
  - Stop shipments to Michigan
  - Establish control for mandated responsibilities
- **Plant to be 140,000 tonnes, with expansion potential**
  - Clarington site is willing host
  - No importation of waste
  - District energy potential with industrial neighbours
- **Success to date resulting from strong political leadership**
  - Opposition loud but limited
  - No advocacy permitted by proponents
- **Final stages**
  - Preferred vendor (Covanta Energy) selected in April 2009
  - Business case complete by June 2009
  - Approval to proceed in summer 2009

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Case Study: Dufferin

- Dufferin EcoEnergy Park (DEEP)
  - Gasification process
    - Will treat 27,500 tons per year (75 tonnes per day)
    - Will take MSW, ICI, and tires
    - Will generate 3 megawatts
  - Approval in May 2009 to negotiate with AlterNRG
    - Westinghouse Plasma technology
    - County to undertake due diligence
  - Small project with <u>big implications</u>
    - Rejected huge landfill opportunity
    - EFW possible even for small communities
    - If approved, no reason to deny large cities

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Case Study: Edmonton

- **Currently constructing a new integrated processing and transfer facility ($85M)**
  - Landfill to close in July 2009
  - Will only run the transfer station until EFW facility operational
- **Gasification/biofuels facility ($70M) received approval from Alberta Environment in April 2009**
  - 100,000 tonnes per year of processed RDF residues
  - Capacity to co-produce methanol/ethanol and residual syngas
  - Screened over 150 gasification technologies
- **Joint venture**
  - Partner to build/operate gasification and fuel production facilities for 25 years
  - Operational sometime in 2011
- **City of Edmonton and Alberta Energy Research Institute (AERI) also building separate R&D facility**
  - 300 kg/hr pilot gasification facility this year ($9M)
  - Operational by year-end
  - On-going research and development, including different feedstocks and the potential to produce higher value products, such as DME and alcohols

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Integrated In Edmonton

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Lessons Learned

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Best Practices

- **Need a political champion**
  - Because there's always opposition
  - Even the converted can only move in small, incremental steps
- **Decision-makers playing to different audiences**
  - Municipal staff – Council – Ratepayers – Media
  - Provincial staff – Executive - Finance – Cabinet – Premier
- **Must meet zero-wasters head-on**
  - Many generations away
  - No policy will get us there in realistic timeframe
- **Need to recognize different forms of communications**
  - New media – social networking, internet
  - Polling, focus groups
  - Give equal weighting to public meetings
- **Industry leading way and public well ahead of policy**
- **Senior levels of government "get it"**
  - Understand the technology and simplicity
  - See EFW as part of public health infrastructure
  - But live in a complex political world
- **Organized association critical for credibility**

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Progressive Public Attitudes

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Public Opinion

- 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

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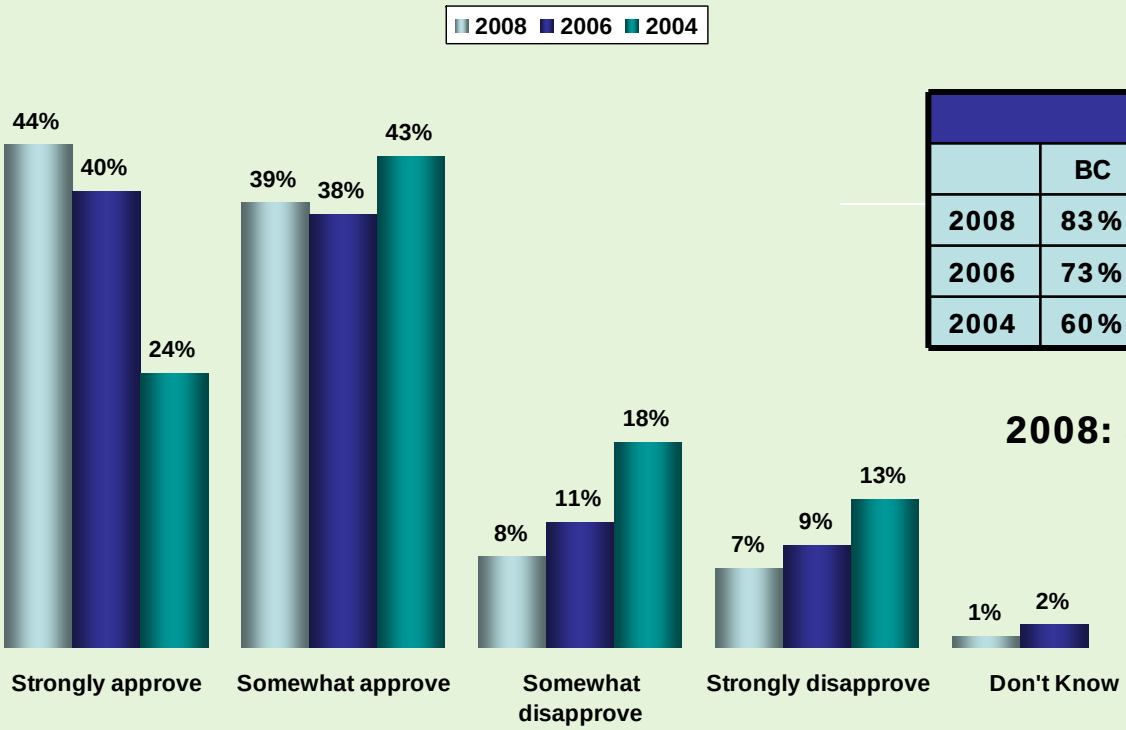
Support is Growing

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



% 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%

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

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)

CANADIAN
ENERGY-FROM-WASTE
COALITION

Two Years From Today

CANADIAN ENERGY-FROM-WASTE COALITION

By 2012…

- **<u>Four or five new projects approved</u>**
  - Moving towards construction and/or operation
  - In Ontario, Alberta, and British Columbia
- **<u>Preferred price for EFW</u>**, with accelerated price for EFW operations that meet recycling and environmental goals
- EFW recognized as **<u>renewable base load power</u>** (thereby recognizing the solid waste management hierarchy), leveraging standard offer program to drive project development
- ✓ Clearly articulated air emissions standards
- Recognition by policy-makers, politicians, and the public, that EFW is…
  - Safe
  - Proven
  - Cost-effective
  - Compatible with recycling
  - Environmentally sustainable
  - Trusted by residents and ratepayers
  - Increasingly utilized worldwide

CANADIAN
ENERGY-FROM-WASTE
COALITION

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