

Canada at the Climate Crossroads





RELUTIONE ARE IN DUR NATURE.



Presentation Outline

Climate Change, Canada & Canadians Domestic Greenhouse Gas Trends The Plan Underlying Strengths & Weaknesses Sectoral Analyses

> Prepared for Building Upon Kyoto Tokyo, Japan, February, 2004 By Alex Boston





Canada, Canadians & The Climate





Canadians: Green & Global

- Natural resource industries threatened
- Natural disasters have hit every region
- Cultural survival of Inuit threatened
- They think they value the environment
 - 98% view nature as essential to human survival
- Canadians believe Canada should be leader in global security









Canadians: decentralized, studious, short-sighted

- Decentralized government with critical jurisdictions under provincial authority

 Oil rich Alberta plays powerful role
- Tradition of extensive consultation and study
- Fossil fuel industries have been favoured in short-term regional development priorities





The New Prime Minister's Agenda

- Renewed Kyoto commitment at opening of parliament
- Envisions an innovative 21st Century economy
- Committed to "new deal" for cities
- Interest in "sustainability within a generation"
- Appreciates creative policy design
- Wants to expand oil and gas



Rt Honourable Paul Martin



Prime Minister Martin on Climate

"We can begin by pressing for an international convention to reduce carbon dioxide emissions by at least 20 per cent. We should set an example by exceeding that target at home."

1992, Parliamentary Opposition Environment Critic







Canadian Greenhouse Gas Trends





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Canada's dirty secret

- GHGs per capita
 27th of 29 in OECD
- Energy use per capita
 27th of 29 in OECD



- 33% less energy efficient than the US
- Fastest ghg growth of any G7 country





Change in GHG Emissions

1990-2001





Greenhouse gas drivers

- Electric utilities +42%
 Coal and gas
- Oil and gas +40%
 - Cnvntl, tar sands, offshore
- Transportation +21%
 - freight and personal
- Industry (w/o oil) stabilized







Canada's Kyoto Gap: 240 MT



Environment Canada. 2003. Canada's GHG Inventory: 1990-2001



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David



Meeting Canada's Kyoto Target









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Sector	1. Action Plan 20002. Updated Plan 2002		3. Next Step
Canadians & Governments: Transport & Buildings	13 MT	15-20 MT	The govt is
Large Emitters	25 MT	55 MT	examining what actions
Misc Industrial Emissions		16 MT	could achieve another 60 MT to meet
Ag, Forestry, Landfills; Sinks, Offsets	38 MT	_	the 240 MT Gap.
International Market	2 MT	Min 10 MT	
Total	Apprx 80 MT	Apprx 100 MT	



General plan strengths

- Some good targets for key sectors
- Many of the actions have great merit
- On the surface, plan seems to:
 - generally cover range of sectors needed to carry out the task
 - generally share burden equitably between individuals, private sector and government





Underlying weaknesses & implementation challenges

- Double counting and ambiguity
- Conflict between emissions intensity & caps
- Concessions to oil and gas industry
- Violates principle of equitable burden sharing
- Study and stall weak consultative process
- Central implementation agency needed
- Voluntarism & spending: insufficient policy instruments
- Stronger analysis of ghg profile and energy use needed





Smart policy design: voluntarism inadequate

- Voluntary Challenge Registry
 - 24% increase in industrial emissions between 1990 and 2000
 - ¼ of participants actually reported on time
 - ½ of companies accounting for industrial emissions ignored program





Smart policy design: regulation works

- elimination of ozone-depleting substances, cut sulphur by half in Eastern Canada, make seatbelts mandatory, eliminate lead in gasoline...
- No evidence of competitive disadvantage even with unilateral action







Smart policy design: expect industry to exaggerate & resist innovation

- Car manufacturers argue CFC compliance would cost \$650-1200. Actual \$40.
- "If the U.S. Environmental Protection Agency does not suspend the catalytic converter rule, it will cause Ford to shut down and would result in: 1) reduction of GNP by \$17 billion; 2) increased unemployment of 800,000; and 3) decreased tax receipts of \$5 billion at all levels of government so that some local governments would become insolvent."

Lee Iacocca, President, Ford Motor Company, 1973



Smart policy design: integrated instruments generate synergies

- Regulation
- Public investment
- Market incentives and disincentives for consumers and manufacturers
- Innovative ecological fiscal reform
- Education & outreach

Smart policy design is:

- Developed with stakeholders
- Giving certainty to business





Stronger analysis of ghg & energy needed

- Traditional approach: identify emission reductions based on BAU forecast in emissions, energy & GDP
- Assumes fuels and electricity are demanded for own sake; rather for the *activities* they provide for
- Seriously underestimates potential for efficiency, conservation, renewables
- Need to focus on end-use (activities)
- Generally assume BAU growth in activities
- Identify efficiencies and fuel switching to meet needs







GHG Emissions by Source





GHG Emissions by End Use



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Large Industry

Covenants and emissions trading	55 Mt
Action Plan 2000 measures	11 Mt

Analysis

- Covenants & Trading is cornerstone of Plan
- Target not large enough considering easy reductions, e.g. 38.4 MT from coal phase out in one province alone
 - electricity should be removed or target increased
 - Lrge double-counting implications

Climate Change Plan for Canada





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Analysis continued

- Govt promise to cover cost of reductions exceeding \$15/MT, shifts risk to taxpayers
- Use of emission intensity metric complicates achieving 55 MT reduction
 - companies re-adjusting BAU forecasts
 - liability to taxpayers if not successful
- Oil & gas industry allowed immense ghg growth with 15% below BAU improvement in intensity, undermining entire Kyoto Plan
 - despite no expectation to reduce ghgs, given subsidies to improve efficiency
 - promised job security when sector has made large cuts in employment
 - Slow progress on legislated backdrop

Large Industry





& Landfills Sinks

Greencover Canada – ag sinks	5.8 MT
Credits for business-as-usual sinks	30 MT
Landfill gas capture	2.2 MT

Analysis

- Sinks have fundamental flaws: temporary; justify more carbon in atmosphere; very vulnerable to fire, insect infestation
- Greencover program is best of a bad concept: great co-benefits
- Landfill gas is a good start
- Landfill/waste diversion ignored

Climate Change Plan for Canada





Fuel Cleaner Fossil Fu & Renewables



Demonstrate clean coal	4.5 MT
CO ₂ capture and storage	3.5 MT
CO ₂ capture and storage pipeline	2.2 MT
Increased inter-provincial electricity	5.4 MT
Wind Power Production Incentive	2.8 MT
10% of new electricity: renewables	3.9 MT
Green power: 20% of federal electricity	0.2 MT



Fuel Cleaner Fossil & Renewable

David Suzuki Foundation

Analysis

- Overemphasis on expensive techno fixes vs existing technologies
- Oil and gas sector subsidized more than \$1 billion annually over last 30 yrs; subsidies should shift to renewables, efficiency
- Inadequate support for real domestic renewable sector
- Inadequate targets for renewables
- New government likely more receptive to expansion of renewables
 - Cogeneration ignored





Transportation



Public / alternative transit	7 MT
+25% in vehicle efficiency	5.2 MT
More efficient freight	2.3 MT
Ethanol/biodiesel production	2 MT
Transit demo projects in cities	0.8 MT
Consumer efficiency & conservation	0.8 MT
Voluntary change: air, rail, truck, marine	2 MT
Demonstration of fuel cell vehicles	0.1 MT



Analysis

- Reasonable mix of measures
- Inadequate long-term support for municipal transit and low target
 - New govt promises change
- Voluntary measures ineffective for efficiency improvements.
 - Regulations needed along with consumer/producer incentives; government purchasing; public education...
 - New government seems willing to regulate and more
- Failure to shift freight from roads to rail
 - Playing field between truck and rail not level



Climate Change

Plan for

Canada



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Govt purchase of int units	10 MT
World Bank Prototype Carbon Fund	2 MT

Flexibility Mechanism

Analysis

- Inadequate information about 10 lacksquareMT program
- World Bank PCF undermines credibility of CDM & Kyoto, threatening livelihoods and environment with projects of dubious climate benefit







Buildings



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Better standards: eqpmnt, appliances	1.6 MT
Retrofit of 20% of residential	1.5 MT
Retrofit of 20% of com/instl buildings	1.2 MT
Make existing buildings more efficient	1.2 MT
Home energy audits	0.7 MT
R2000 standard for all new housing	0.7 MT
New com/instl buildings +25%	0.4 MT
Increase efficiency of govt buildings	0.2 MT



Analysis

- Retrofits good start
- Good mix of measures
- Gross underestimate of potential for efficiency standards in appliances, equipment, buildings to reduce ghgs
- Slow phase in time for everything



Buildings



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Sized Enterprises



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Voluntary targets for SMEs	0.7 MT
Industrial efficiency improvements	2 MT
Reducing fugitive emissions	4 MT





Individual Action

One Tonne Challenge

(30 MT)

Analysis

- Tremendous potential to succeed & fail
- Professional creative support needed
- Well integrated into other programs: standards, incentives...
- Significant outreach opportunities









I shall be telling this with a sigh Somewhere ages and ages hence: Two roads diverged in a wood, and I -I took the road less travelled by, And that has made all the difference. Robert Frost

