

The Chicago Climate Exchange: Creating a Market for GHG Reduction Credits From Brazilian Forests



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Examples of GHG Emissions Trading Activity

International Agency Initiatives	Emerging Plurilateral Trading Groups	Initiatives for National GHG Emissions Trading Programs or the CDM
World Bank Carbon Fund	Umbrella Group	United States
UNCTAD Global Policy Forum	Japan, US, Canada, Australia, New Zealand, Iceland, Norway, Russia, Ukraine	United Kingdom
OECD Workshops & Research		Canada
International Energy Agency	European Union	Australia
UNEP	Scandinavia	Norway
UNDP		Denmark
UNIDO		Netherlands
European Commission		New Zealand
Nordic Council		Russia
EBRD		Brazil
		Costa Rica
		Central America
		Slovakia
		32 host countries with CDM/AIJ offices of projects



Examples of GHG Emissions Trading Activity (Cont'd)

Provincial, State, Local Programs	Corporate Initiatives & Exchange Activity	Examples of Trading Activity
United States	BP-Amoco	Environmental Financial & Costa Rica
Oregon	Shell Oil	Ontario Power-Zahren Alternative Power
New Jersey	Dupont	GEMCO-IGF Insurance
California	Ford Motor Co.	BP-Amoco-The Nature Conservancy
	Ontario Power	Arizona Public Service-Niagara Mohawk
Statement of US Mayors :	TransAlta	Suncor Energy-Niagara Mohawk
Washington, DC	Suncor Energy	Sumitomo-United Energy Systems (Russia)
Denver	AES	Pacific Power Australia- New South Wales
San Francisco	Environmental Financial Products/CCX	Tesco-Uganda forest
Atlanta	Dutch Electricity Board (FACE Foundation)	Waste Management Inc.-Enron
Chicago	Edison Electric Institute (Utilitree)	American Electric Power-The Nature Conservancy
Australia	Pew (21 corporate members)	Central & Southwest-The Nature Conservancy
New South Wales	World Resources Institute (3 corporate members)	Illinova-U.S. Reforestation
Western Australia	Cantor Fitzgerald/PWC	Consorcio Noruego-Costa Rica
	Natsource/Accenture	Toyota-New South Wales
Canada	Environmental Resources Trust	
PERT (Ontario)	GMO Forestry	
GERT (British Columbia)	Hancock Natural Resources Group	
British Columbia	International Petroleum Exchange	
	Chicago Board of Trade	
International		
International Council of Local Environmental Initiatives		



State of the GHG Emissions Market

- Starting to emerge—in its infancy
- The “commodity” is not standardized
- Multiple markets
- Each trade is different
- No organized exchanges
- No clear market price
- Supply outstrips demand



How “CDM” Rules Can Help Attract Investment

- Simple and standardized
 - Low transactions costs
 - Uniform Instruments
 - Predictable
- Transparent, don't politicize
- Options for small projects



U.S. Legislative and Regulatory Outlook

- Early Reduction Credit Proposals
- “Four Pollutant” Bills
 - Electric power sector
 - Tonnage cap on CO₂
 - Trading allowed or specified
- Carbon sequestration in biomass and soils
- Regulation of GHGs from other sectors
- State Level Initiatives



Barriers to Trading: High Transaction Costs

- The commodity is not yet well defined.
- Regulations limiting GHGs are not yet in place.
- Lack of uniform standards for monitoring, verification and certification.
- Lack of organized markets.



CCX Overview

The Chicago Climate Exchange is a voluntary pilot greenhouse gas trading program targeting emission sources and offset projects in North America, with limited offset projects in Brazil.



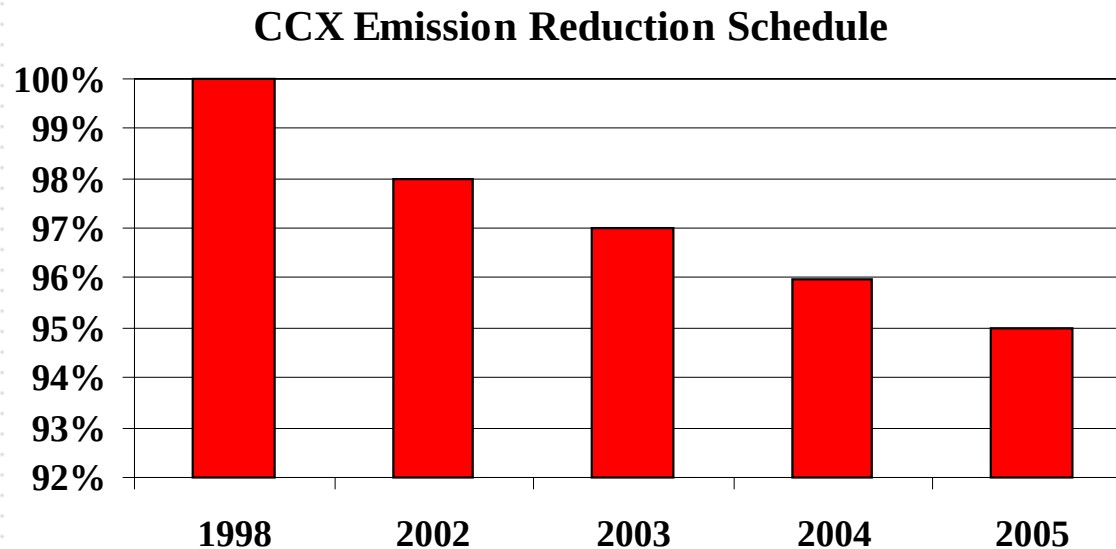
Objectives

- Proof of concept: capped GHG emissions trading system, supplemented by offsets
- Develop market infrastructure and skills
- Price discovery
- Predictable GHG reduction schedule
- Start small and grow over time, provide a model



Standardized Reduction Timetable

- 2002: Reduce emissions to 2% below 1998 levels
- 2003-2005: target falls additional 1% per year (from 1998)
- Realistic emission limits for new facilities



Market Implementation

2001	2002	2003	2004
LAUNCH	PHASE 1	PHASE 2	PHASE 3
System launch is targeted for the second half of 2001.	Reduction commitments taken by participants in seven-state Midwest region.	Commitments and trading by participants in the entire United States, Canada and Mexico.	Chicago Climate Exchange SM expanded to include international participants.



Initial Region of Focus

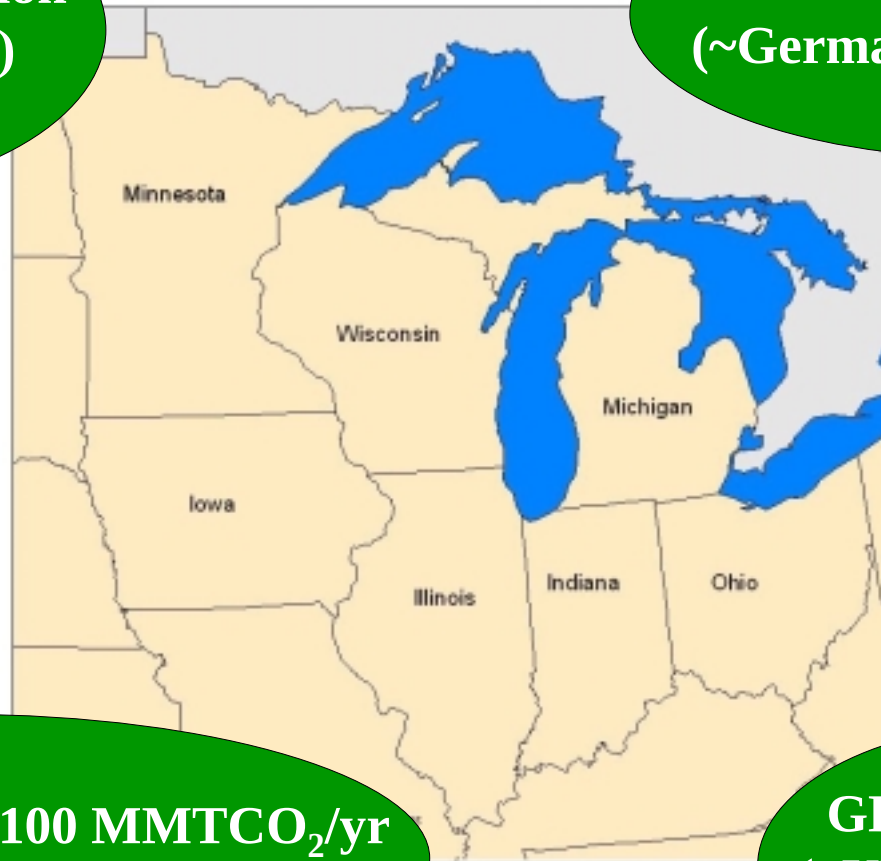
- Seven central U.S. states (IL, IN, IA, MI, MN, OH, WI)
- Diverse economy
 - Large industrial base, including automakers
 - Major transport sector
 - Diverse energy sector
 - Pharmaceutical, electronics, and resource industries
 - Agricultural and forest land
- Representative of the U.S. economy



Seven-State Midwest Region

Population = ~52 million
(~United Kingdom)
20 % of US

Land Area ~1 million sq. km.
(~Germany + UK + France)
11% of US



GHG Emissions = ~1100 MMTCO₂/yr
(~France + UK)
20% of US

GDP ~\$1.8 trillion
(~UK + Netherlands)
19 % of US



Market Establishment: 12 Steps

- Clearly define the commodity
- Establish market oversight
- Define baselines
- Set emission targets, allocate permits and monitor emissions
- Establish uniform allowances, define eligible credits
- Develop an allowance clearing house
- Employ existing exchanges and trading systems
- Develop auctions
- Refine and develop trade documentation practices
- Foster harmonization with other research and markets
- Develop appropriate accounting principles
- International linkages



Apply International Standards

- Allowances (“budgets”)
- Project-based offsets: sinks, renewables, methane destruction and CDM (Brazil)
- Include all GHGs
- Use IPCC global warming potentials



Allowances and Offsets (Endogenous and Exogenous)

- Allowances: emission budgets of participating companies
- Endogenous offsets
 - Made in Midwest (Phase 1) and North America (Phase 2)
 - Sinks (forests and soils)
 - Methane destruction, renewables
- Exogenous offsets
 - In selected developing countries (e.g. Brazil)
 - Sinks, methane destruction, energy related



Benefits of Participation

- Gain first-mover advantages; help design protocols
- Build management and trading skills
- Reduce long-term GHG mitigation costs
- Enhance reputation among stockholders
- Reward/encourage environmentally sustainable practices; financial gain to sellers



Guidelines for System Design

- Based on unambiguous rules
- Representative of U.S.
- Can be scaled up for comprehensive coverage of emissions
- Responsibility for emissions placed at emissions source (point of maximum responsiveness) whenever feasible



Important Features

- Voluntary participation
- Self-governed / self-funded
- Focus: direct emissions and sequestration
- Standardized baseline period, simple offset rules
- Phased reduction commitments

