

Emission Trading – A Tool to Promote Sustainable Development

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Sustainable Development in Communities

November 26, 2007

Emission Trading

- Established to facilitate environmental improvements and address economic implications
- Allows for the most economic emission reduction to occur, reducing cost to society
- Allows flexibility in selecting most economic opportunities to achieve emission reduction objectives
- Offsets created by uncapped facilities can spur environmental innovation and competitiveness
- Trading remains a viable option until the cost exceeds the cost of self compliance

Ontario NO_x & SO₂ Experience

Cap and Trade with Credits

➤ Ontario Regulation 397/01

- ◆ OPG capped under emission trading regulation since 2002
- ◆ Independent Electricity generators capped since 2004

➤ Ontario Regulation 194/05

- ◆ Other industry sectors capped commencing 2006 (cement, pulp & paper, iron & steel, petroleum, base metal, carbon black)

➤ Emission Trading Code

➤ Ontario Emissions Trading Registry (OETR)

Ontario Cap & Trade with Credits

- Overall emission cap established for sector
- NO_x and SO₂ emission allowances granted annually to capped emitters in Ontario by Ontario Ministry of Environment
- Facilities emitting below allocation have surplus allowances to sell or bank for future
- Facilities emitting above allocation buy allowances or credits
- Companies outside of the cap can create “credits” or apply for “set aside” allowances

Tradable NO_x & SO₂ Commodities

➤ Allowances

- ◆ Allocated annually to capped emitters

➤ Emission Reduction Credits (ERCs)

- ◆ Emissions reduced directly at the source
- ◆ Only uncapped emitters are eligible
- ◆ Eligibility zone includes Ontario + 13 states
- ◆ Triggers a 10% gift to the environment

➤ Set-Aside Reductions(SRs)

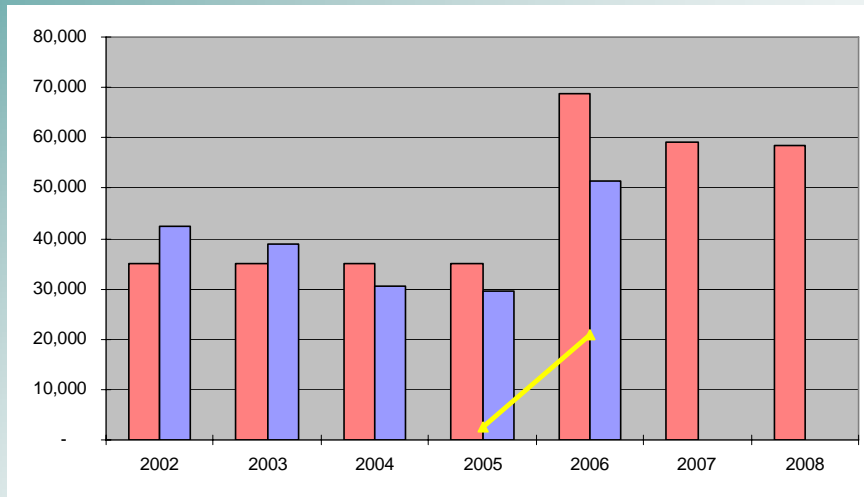
- ◆ Renewable Energy and Electricity Conservation projects in Ontario
- ◆ Indirectly reduce emissions by reducing the amount of emissions from the power generation mix of Ontario
- ◆ 1 Gg NO_x and 4 Gg SO₂ available annually
- ◆ Once approved, can apply to be converted to Allowances

Creation of ERCs & SRs

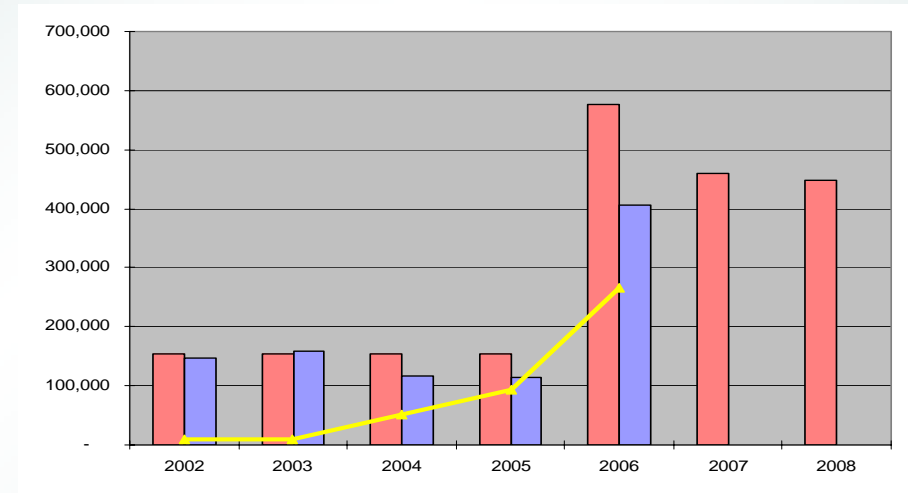
- Requires Approved Standard Method (describes a process, process change or technology which reduces emissions)
- 7 year limit of eligibility
- Documentation
 - ◆ Protocol
 - ◆ Emission Reduction Report
 - ◆ Verification Report
 - ◆ Supporting Documentation
 - ◆ Posted for 30 day public review and comments period
- Approval by Director

Granted vs Retired

NO_x



SO₂



■ Granted
 ■ Retired
 ■ Surplus

- New industry participants in 2006
- Allowances granted are lower in 2007 and 2008
- Market is long on both NO_x and SO₂

Market Inventory

OETR Inventory (Nov 2007)	Allowances	ERCs (AE)	Set Asides	Total AE
NO _x	104	20	0.1	124
SO ₂	731	0.3	0.4	732

	<u>NO_x</u>	<u>SO₂</u>
Retired in 2006	50	400
Granted in 2007	59	459

- Market will continue in surplus position

Observations

- **Emissions declined each year in electricity sector (too early to tell in other industry sectors)**
- **Limited Market Activity**
 - ◆ OPG only buyer of NO_x until 2006
 - ◆ Few buyers in the market
- **Limited Trade Volumes**
 - ◆ 8 Gg NO_x ERCs
 - ◆ 2.5 Gg NO_x Allowances
 - ◆ 16 Gg SO₂ Allowances
- **Applications for ERCs and SRs**
 - ◆ 9 companies own 20 Gg NO_x and 0.3 SO₂ ERCs (AE)
 - ◆ 4 companies own 0.16 Gg NO_x and 0.57 SRs

Canadian Framework for GHG

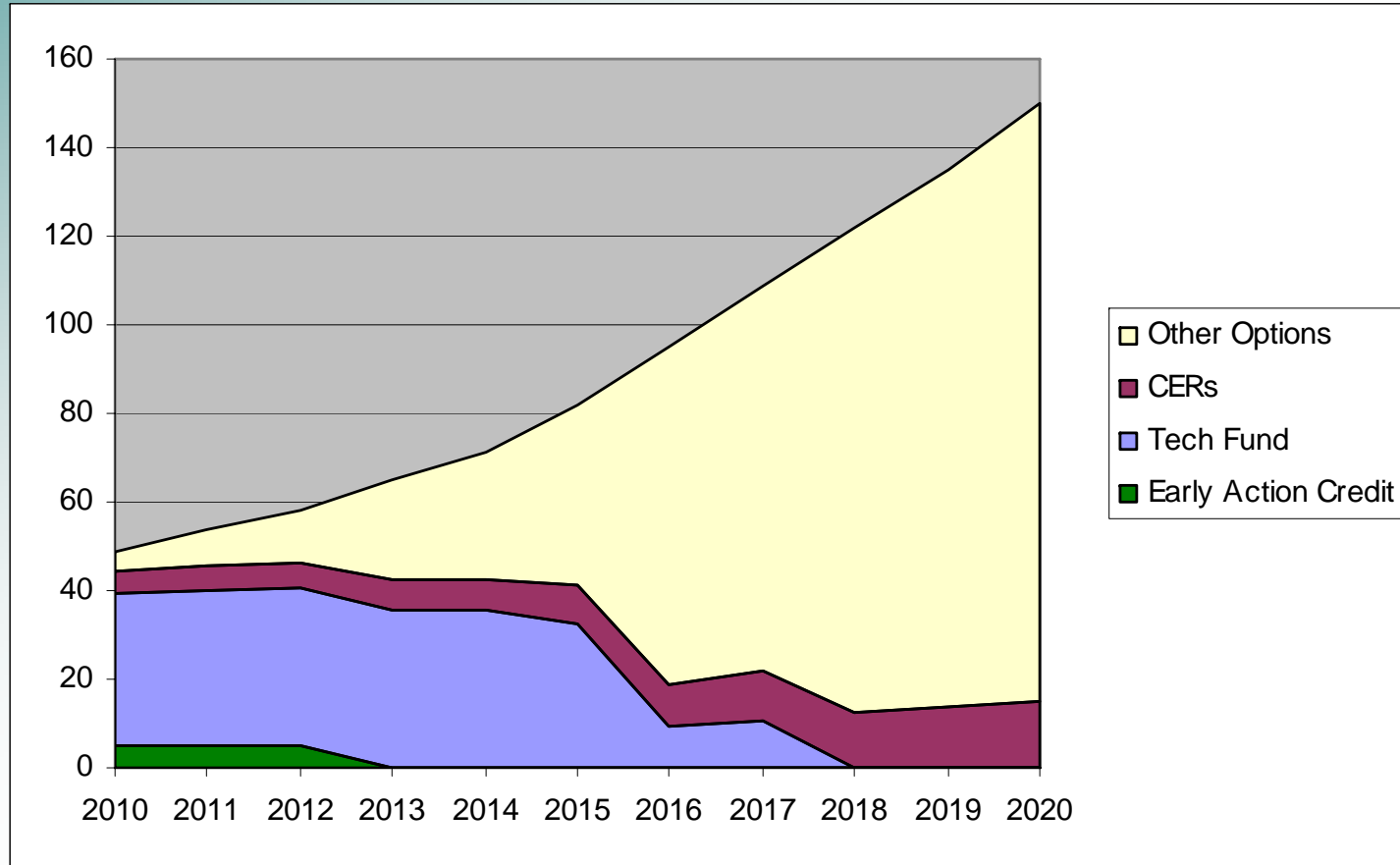
Emission Intensity reductions from 2006 baseline within specified sectors

- ◆ Electricity generation (combustion); oil and gas; forest products; smelting & refining; iron & steel some mining; and cement, lime & chemicals
- ◆ 18% reduction in CO₂ intensity in 2010
- ◆ 2% per year to 2015, for a total of 26% by 2015.

➤ Compliance Mechanisms and proposed limits

- ◆ Internal abatement
- ◆ Domestic Emission Trading (no limit)
- ◆ Technology Fund (70% 2010 limit reduced to 0% in 2018)
- ◆ Clean Development Mechanism (CDM) (10% limit)
- ◆ Credit for Early Action (15 MT limit)

GHG Offsets Required to 2020



➤ Domestic offsets will be required for compliance



Thank You