



Climate Exchange Plc. (CLE.L)

Wealth Creation in the U.S. since WW II

- 1945-70 Manufacturing
- 1970's Inflation
- 1980's Commoditization of interest rates, asset liability mgmt., commoditization of mortgages and bank debt (junk bonds)
- 1990's Commoditization of information: High tech, Telecom
- 2000's Commoditization of air and water



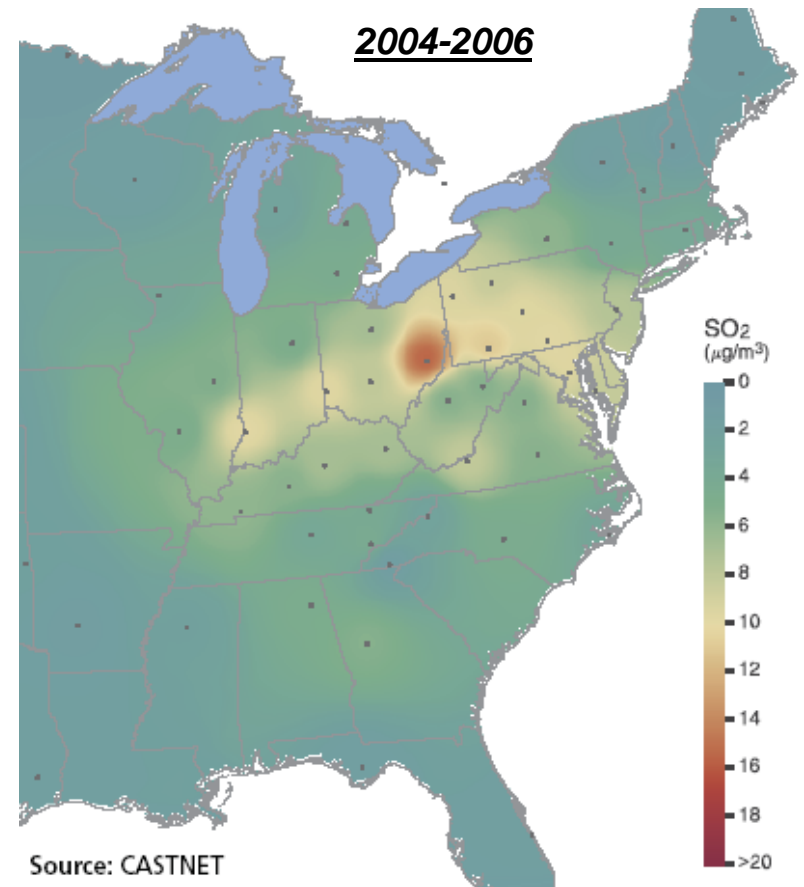
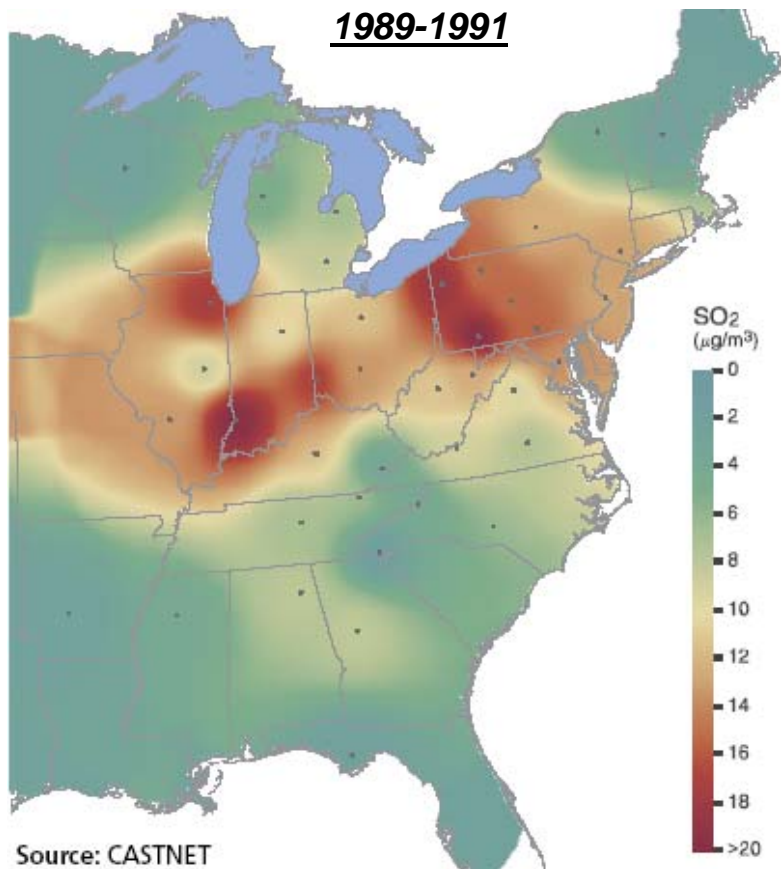
Why Emissions Trading?

- Proven, least-cost, and comprehensive tool for managing emissions: (CCX as an Emissions Management System)
- Environmental stewardship that rewards environmental innovation and strategic planning
- Flexibility, market efficiencies
- Multiple successes: US SO₂, lead phase-out (gasoline), NOx, ETS
- Enhances coherent management practices and technological innovation
- Establish value to scarce resource
- Carbon price signal
- Reveals hidden assets and hidden costs throughout operations



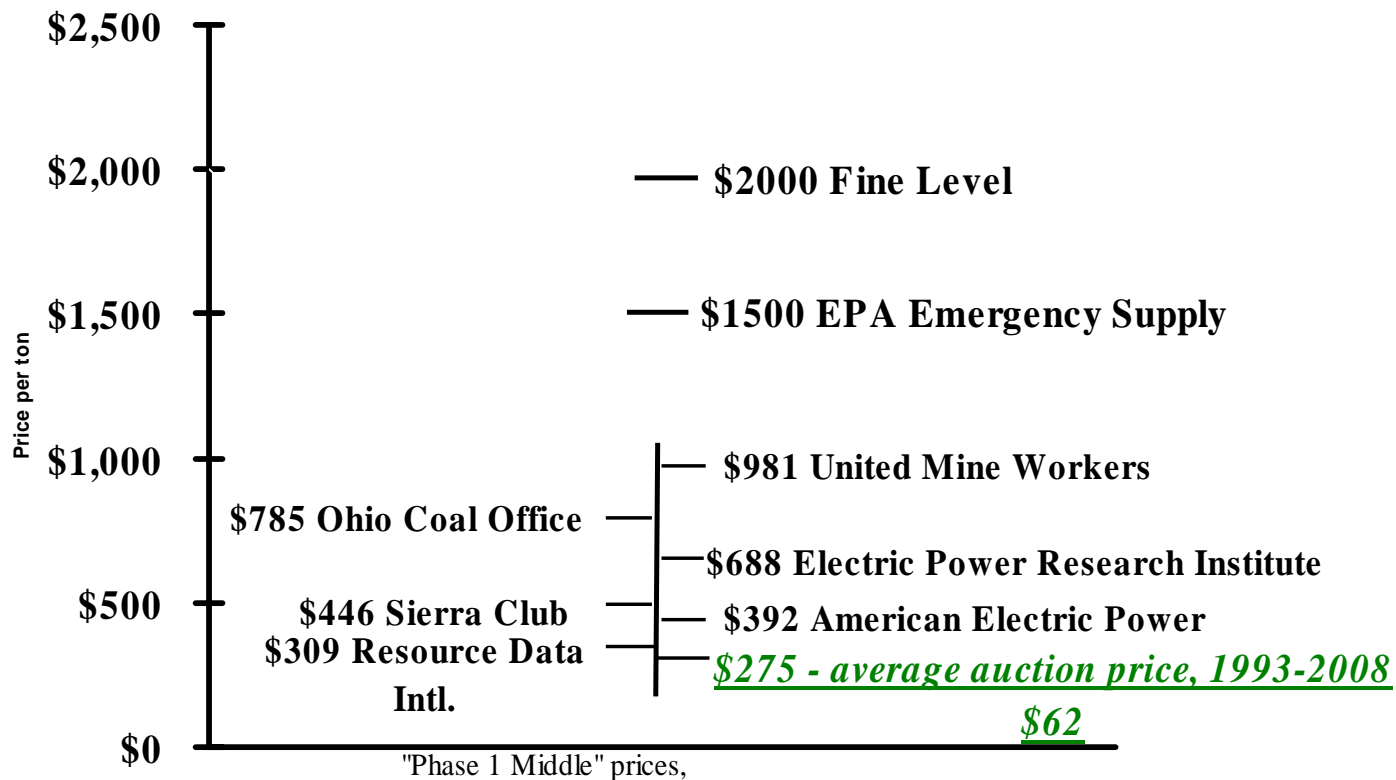
Impact of Trading on SO₂ Pollution

Annual Mean Ambient SO₂ Concentration



- The US Acid Rain Program's annual benefits in the year 2010 are expected to be \$122 billion (Yr. 2000 \$)
- Based on EPA's latest air quality trends data the national composite average of SO₂ annual mean ambient concentrations decreased 48 percent between 1990 and 2005.

Pre-1992 SO₂ Allowance Price Forecasted vs. Actual



Benefits of SO₂ Emissions Reductions

- Costs to the U.S. economy of the Acid Rain Program: \$ 1- 2 billion
- Real electricity rates are lower today than in 1990
- Current benefits associated with reduced medical expenses associated with lung disease ~ \$40 - 70 billion
- Future benefits (estimated by EPA) expected to grow to \$100 billion annually in 2010 with the same annual costs.



Price Mechanism Use Cost

- Property rights, government regulation
- Building institutions to minimize transaction costs
- Minimizing per unit transactions cost



Minimizing per Transaction Costs: Contract Design

- **Treasury Bonds**



Property Rights, Government Regulation

Definition of “commodity”

“The word commodity shall mean wheat, cotton, rice, corn...and all [other] goods and articles and all services, rights and interests in which contracts for future delivery are presently or in the future dealt in...” (CFTC Act 1974)

- Issue of intangibility
- Exclusive jurisdiction by the CFTC
- Senate vs. House: Role of Senator Talmadge-Georgia (Chairman, Agriculture Committee)



Mission Statement

- CCX, the founding entity of Climate Exchange plc, is an Exchange whose objectives are to apply financial innovation and incentives to advance social, environmental and economic goals.
- In the absence of national or local regulations, CCX designs and implements emissions trading systems which have, in many instances, anticipated public policy.
- When a regulatory framework already exists, CCX operationalizes the law through the use of a regulated and transparent platform which provides price discovery and low-cost hedging mechanism
- Voluntary – Chicago Climate Exchange, Tianjin Climate Exchange
- Mandatory - European Climate Exchange (EUAs and CERs), the Chicago Climate Futures Exchange (SO₂, NO_x and RGGI) and the Montreal Climate Exchange
- CCX, ECX and CCFE are owned by Climate Exchange plc, a London Stock Exchange-listed company (CLE.L)



Climate Exchange Plc (CLE.L)

Chicago Climate Exchange[®]

- North America's only Greenhouse Gas emissions allowance trading system. This CFTC Exempt Commercial Market is members-only.

****Spot CO₂ contract**

European Climate Exchange[®]

- Leading derivatives exchange for European carbon credits under EU Emissions Trading Scheme (EU ETS)

****EUA Futures and Options**

****CER Futures and Options**

Chicago Climate Futures Exchange[®]

- A CFTC designated contract market that offers standardized and cleared futures and options contracts on emission allowances and other environmental products.

**** SO₂ futures and options, NO_x futures, CFI Futures, CER futures, IFEX futures, ECO Index Futures**



A Global Exchange Family

Montreal Climate Exchange™ (MCeX)

- Joint venture with the Montreal Bourse
- Launched May 30, 2008

- **Tianjin Climate Exchange – China**

- **EnVex - Australia**

India Climate Exchange™

- (In development)
- **Future – India, Japan, Korea, Latin America**



What is the Chicago Climate Exchange?

A Global Cap-and-Trade System

Chicago Climate Exchange (CCX[®]) administers the world's first and North America's only active voluntary, legally binding integrated trading system to reduce emissions of all six greenhouse gases, with offset projects worldwide



CCX[®] - FINRA Partnership

- Need for creation and development of regulatory framework
- Transparency
- Integrity
- Liquidity



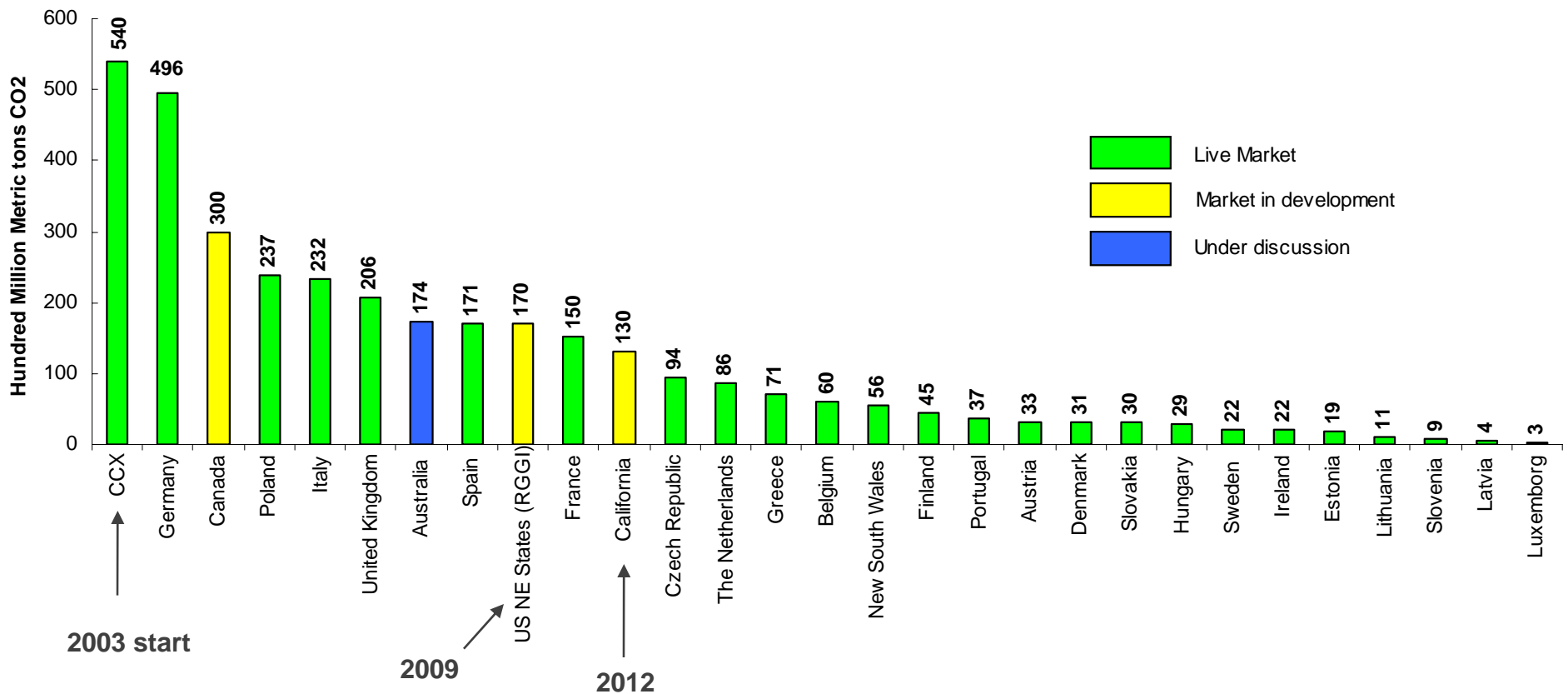
CCX Members are Sector Leaders

A Selection of Members



CCX Baseline Emissions Now Greater than Largest EU National Allocation Plan

Size of Live, Emerging, Possible GHG Trading Markets

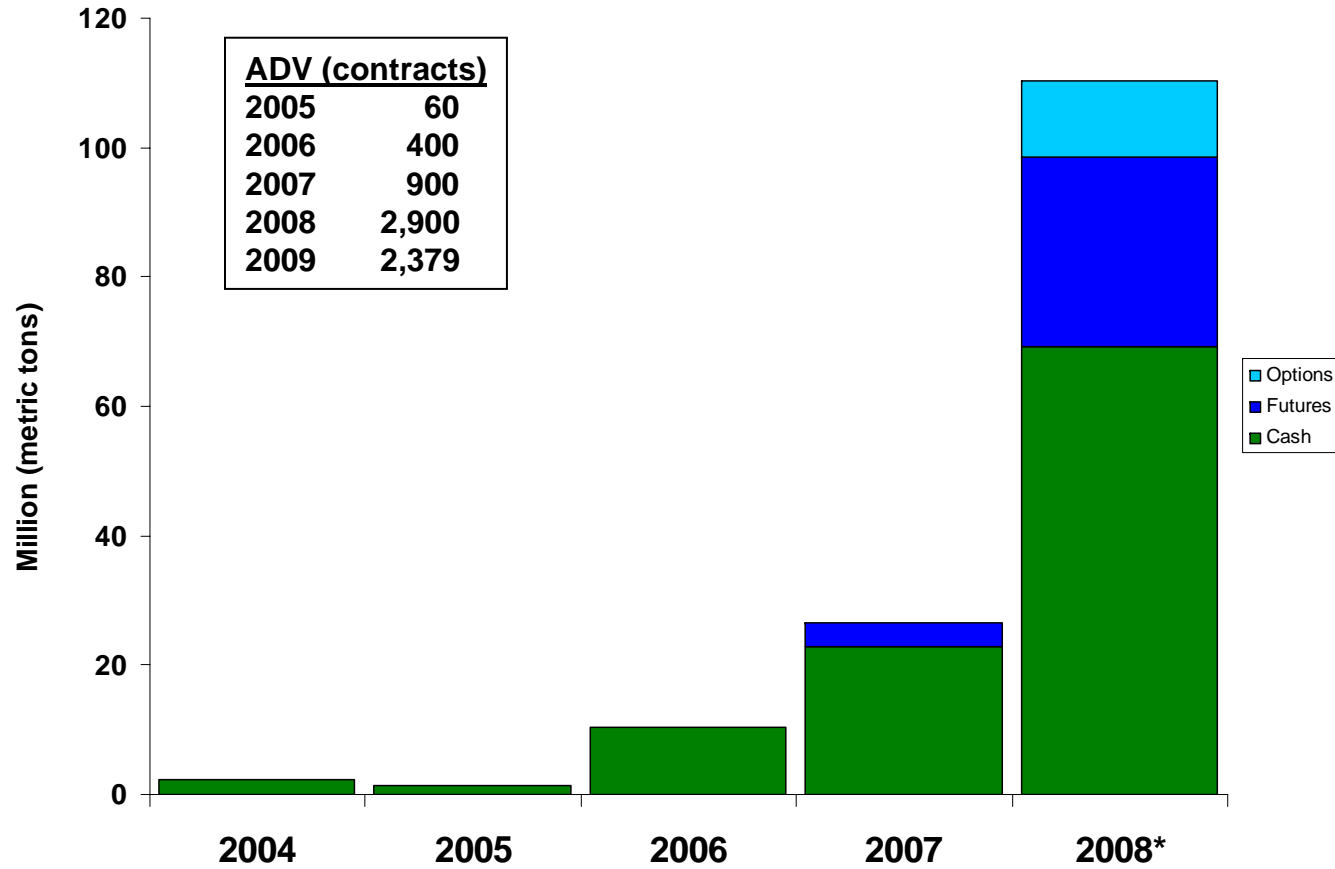


Why Members Join

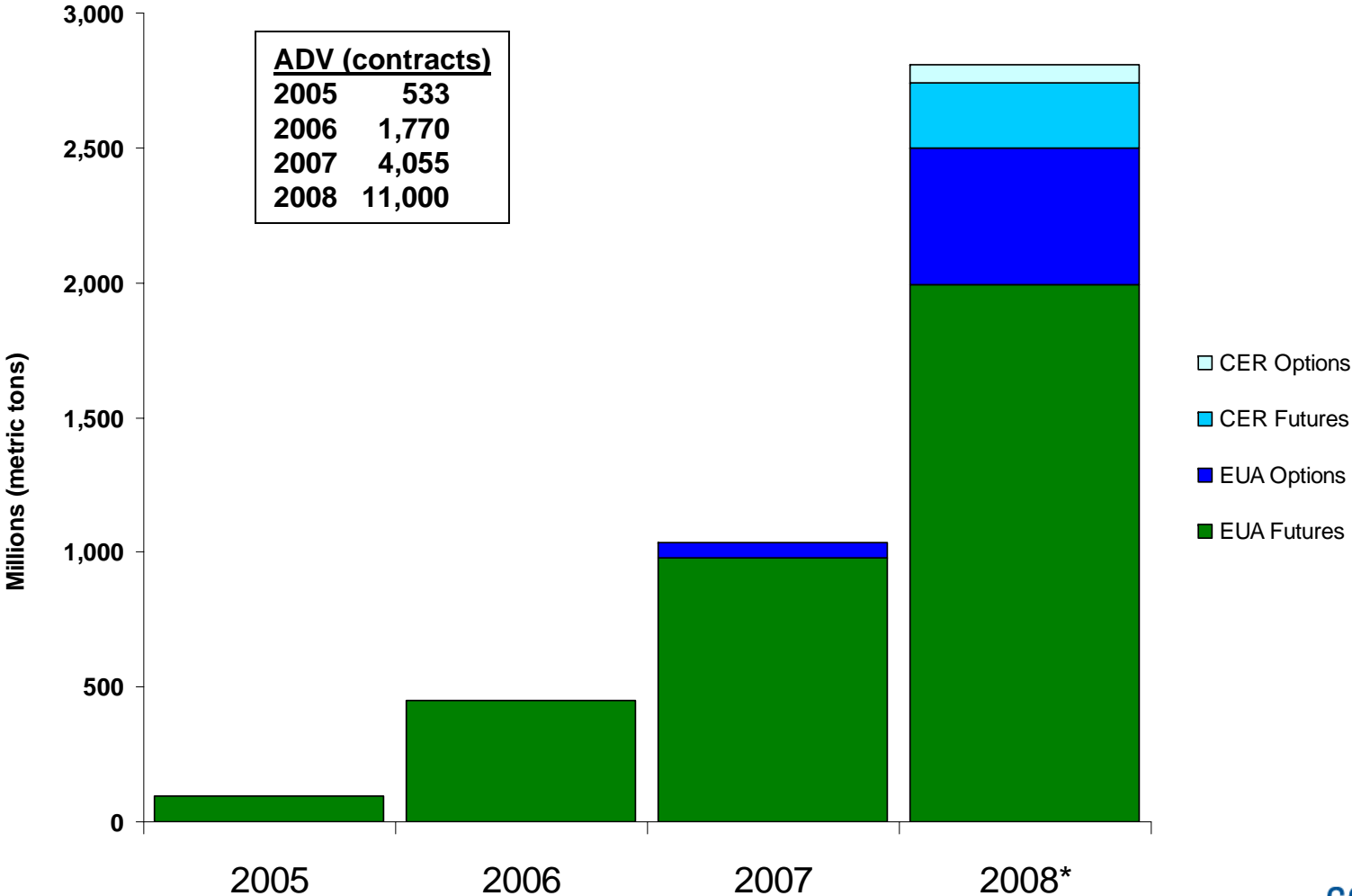
- To create shareholder value
- To manage risk
- To demonstrate corporate and environmental transparency
- To obtain first-mover advantage in emissions trading
- To get ahead of policy and preserve early action
- To inform policy design



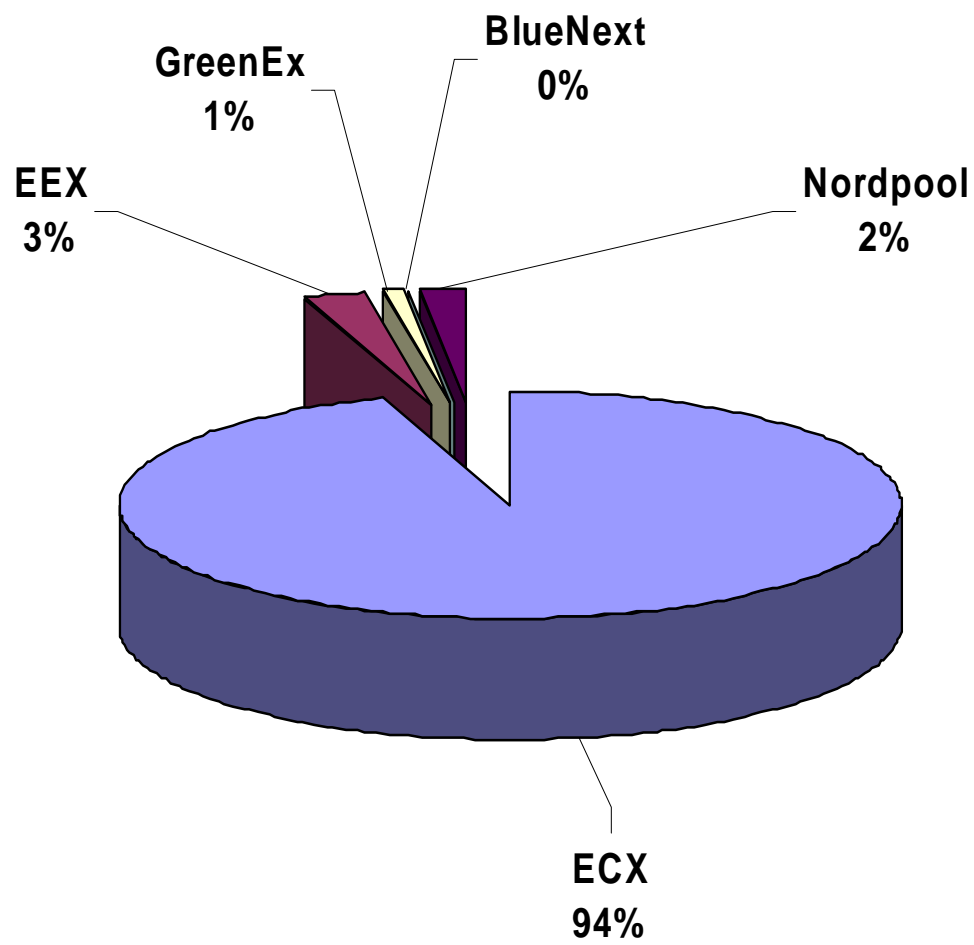
CCX and CFI[®] Historic Volumes (metric tons)



ECX Historic Volumes (metric tons)



Total 2008 EUA & CER Derivatives Volumes

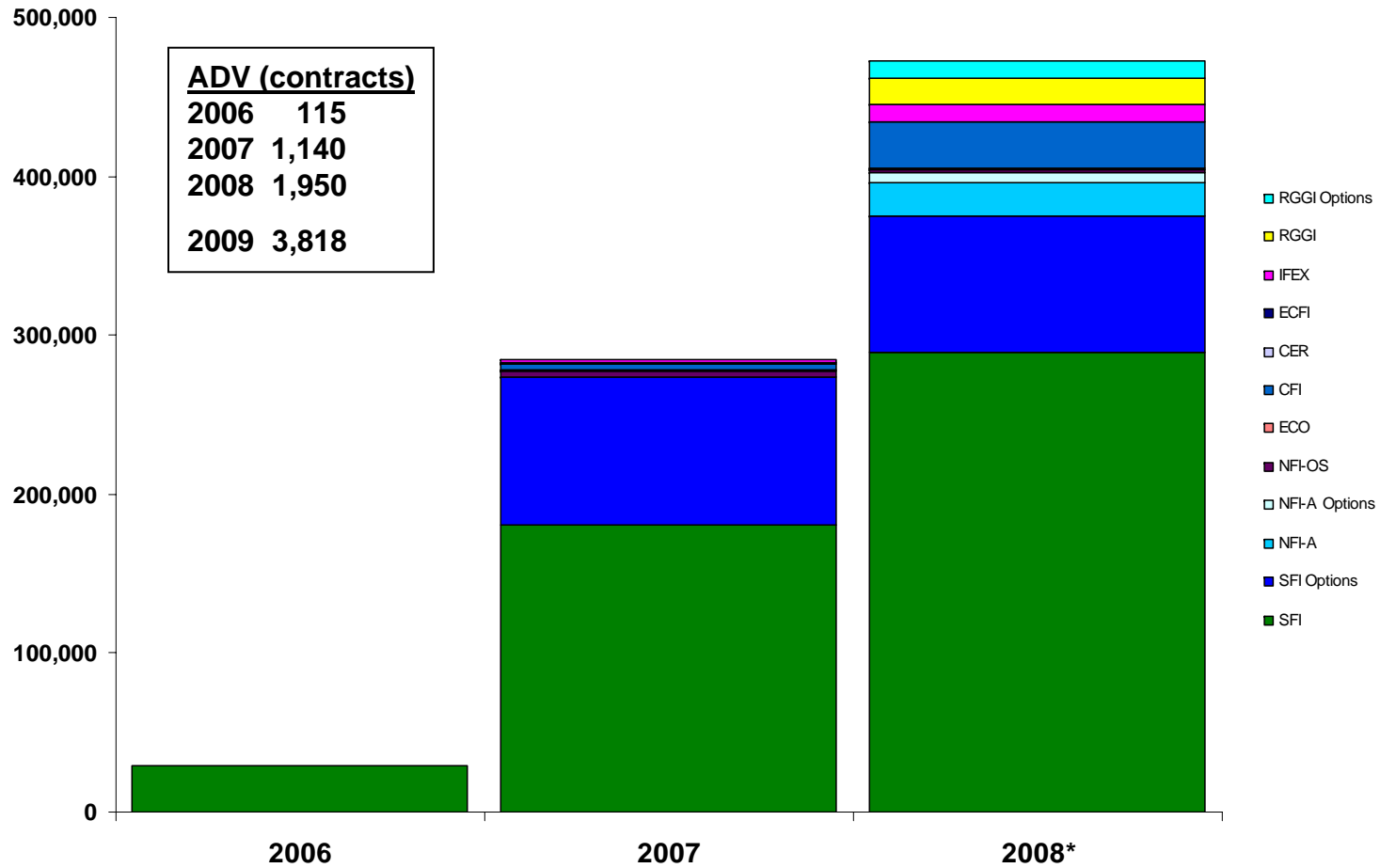


Chicago Climate Futures Exchange (CCFE)

- CFTC Designated Contract Market
- The price reference point for U.S. SO₂ and NO_x
- Products:
 - Sulfur Financial Instrument (SFI) Futures and Options
 - Nitrogen Financial Instrument – Ozone Season (NFI-OS) Futures
 - Nitrogen Financial Instrument – CAIR Annual (NFI-A) Futures and Options
 - Regional Greenhouse Gas Initiative (RGGI) futures and options
 - European Carbon Financial Instrument (ECFI) Futures
 - Certified Emission Reduction (CER) Futures and Options
 - Carbon Financial Instrument (CFI) Futures and Options
 - ECO-Clean Energy Index (ECO-Index) Futures
 - IFEX U.S. Wind Event Linked (IFEX-ELF) Futures
- SFI Futures & Options Volumes
 - 2006 – 28,924 contracts
 - 2007 – 272,888 contracts
 - YTD 2008 – 220,503 contracts

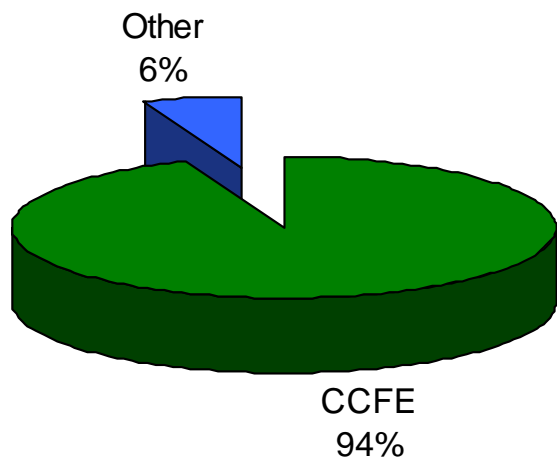


CCFE[®] Historic Volumes (contracts)

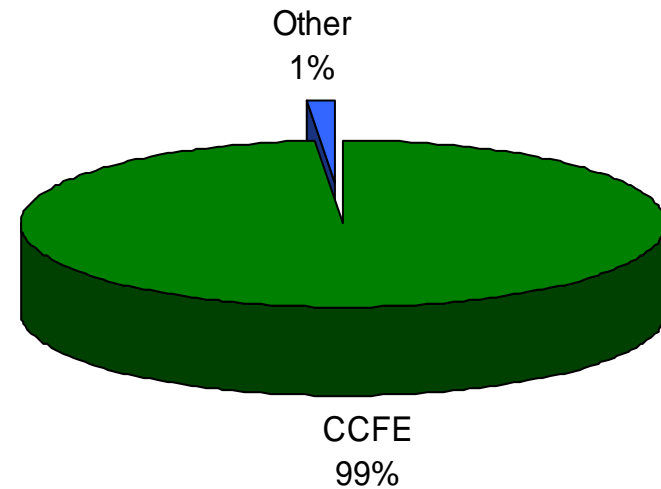


CCFE[®] Exchange Volume Comparisons

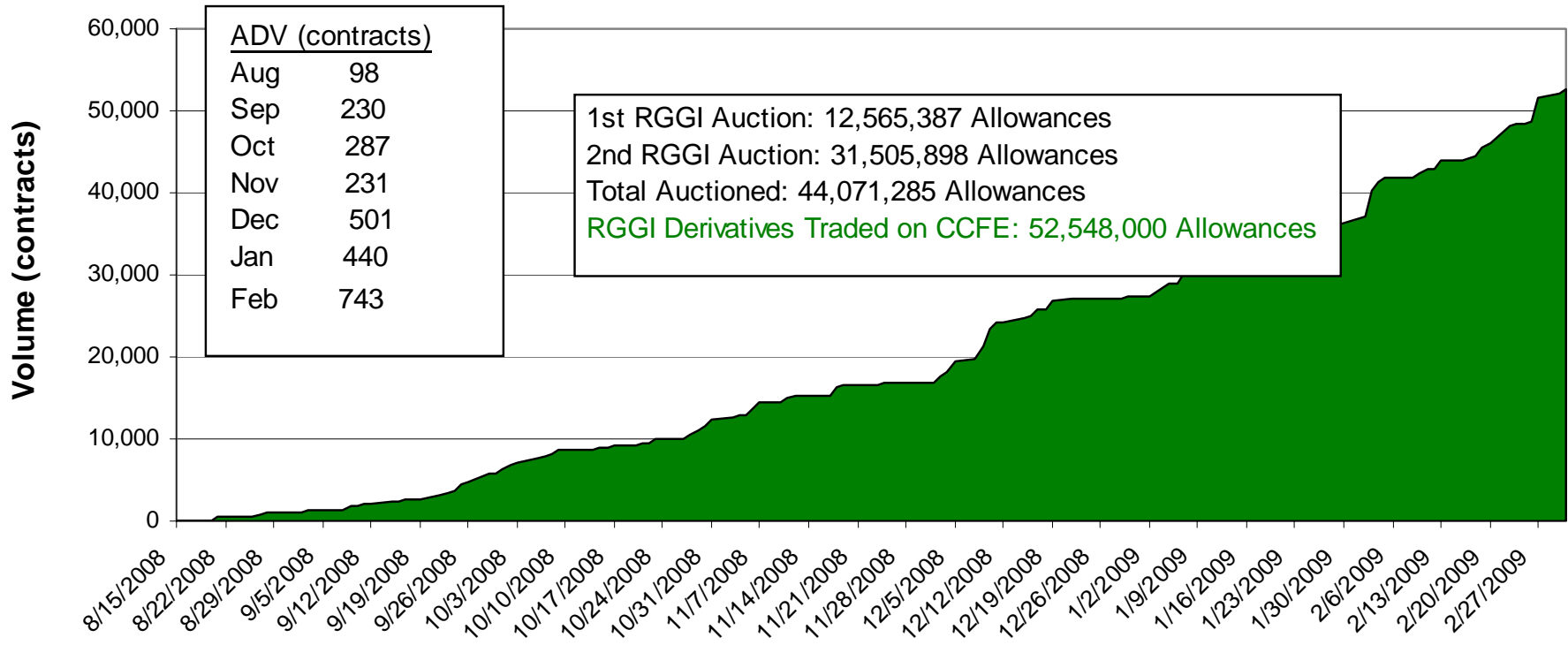
SO₂ and NO_x Futures and Options



RGGI Futures and Options



Cumulative RGGI Futures & Options Growth



The Role of Price Discovery

- To stimulate inventive activity
- To reorganize corporate financial decision-making
- To monetize hidden assets



Air - China

Coal

- 70% of China's energy derived from combustion of coal
- China consumed 128% more coal than U.S. in 2007
- Two coal plants constructed in China each week on average

Emissions

- World's largest emitter of SO₂ (26 million tons in 2006)
- World's largest emitter of greenhouse gases (~7.2B tons)
- World's largest emitter of mercury (~600 tons)
- Nitrogen oxide (NO_x) emissions have increased 48% in the last five years



Water - China

- Water Scarcity
 - Low per capita water use, uneven spatial distribution of water
 - Desertification occurring rapidly, 25% of the country is desert and continually expanding
 - 67% of China's cities have insufficient water with 16% already experiencing chronic shortfalls
 - Adverse impacts of climate on the hydrologic cycle could intensify shortages
- Water Quality
 - Large amounts of water unfit for human consumption
 - 700 million people in China drink water contaminated with waste
 - Only 23% of factories properly account for sewage before disposing it
 - 75% of water in urban areas is undrinkable
 - Contaminated drinking water is leading cause of death for children under five



Consequences

- 16 of the 20 most polluted cities in the world are in China
- Annually 400,000 people die prematurely from respiratory illnesses
- Health care costs associated with air pollution cost approximately 4% of GDP
- Estimated 51,000 local pollution-related protests in 2005

