

Emission Trading Policies



Applications in the U.S. and China

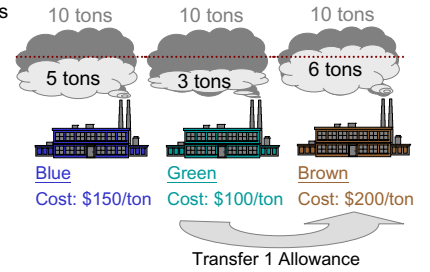
Hong Kong Business Environment Council
2005 October 31

Jeremy Schreifels (schreifels.jeremy@epa.gov)
U.S. Environmental Protection Agency

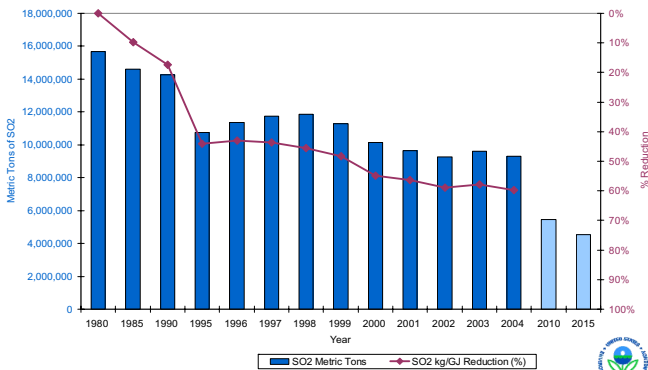


Cap & Trade Explained

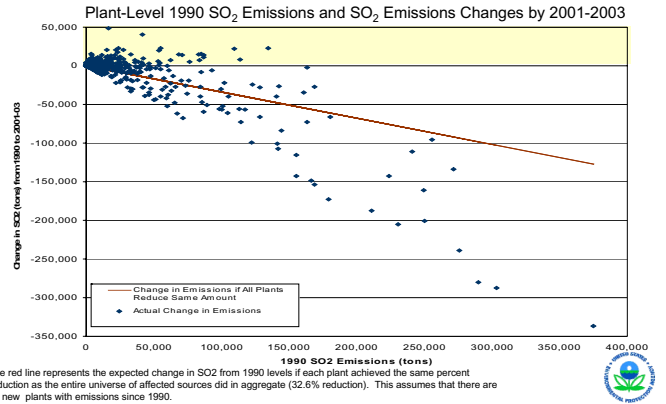
- Government establishes emission cap and distributes to emission sources
- Sources develop compliance strategy and may trade with other sources
- Sources monitor and report emissions
- Government assesses compliance



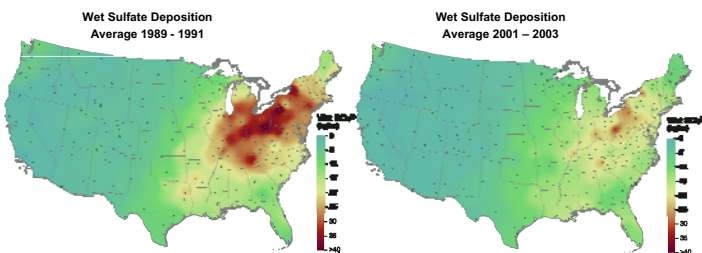
U.S. Acid Rain Program Results: Emission & Intensity Reductions



U.S. Acid Rain Program Results: Greatest Reductions Occurred at Highest-Emitting Power Plants



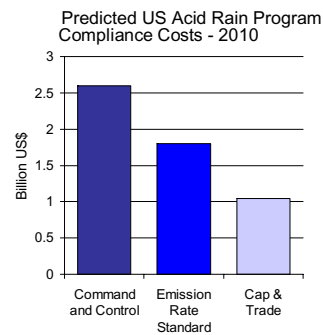
U.S. Acid Rain Program Results: Major Reductions in Acid Rain



Sulfur deposition and concentrations down 40% across the Eastern U.S. Signs of recovery are evident in some acid sensitive ecosystems



U.S. Acid Rain Program Results: Low Cost of Compliance



Why Are Costs So Low?

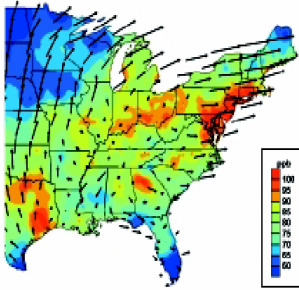
- Power plants have the flexibility to develop low-cost compliance strategies
- Emission reduction options must compete
- Incentives for innovation are strong and continuous
- Banking provides timing flexibility
- Allowance price provides a benchmark for decision making
- Trading is not restricted

Source: Resources for the Future

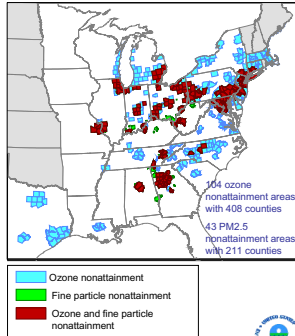


Clean Air Interstate Rule

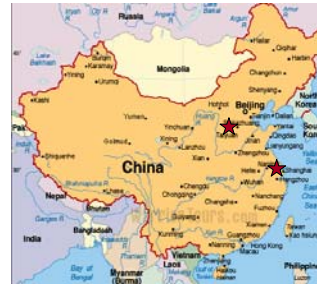
Transport Winds and Ozone Patterns on High Ozone Days



2004 Ozone and Fine Particle Nonattainment Areas



Emission Trading in China



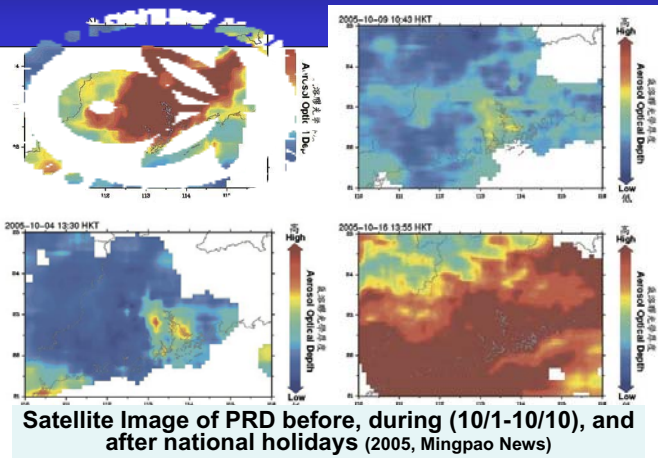
Shanghai: Emission Measurement

Taiyuan: Cap & Trade



Key Issues of Cap & Trade Programs

- Environmental goal
- Point of regulation
- Allowance distribution and use
- Emissions monitoring and reporting
- Compliance and enforcement
- Transparency



Satellite Image of PRD before, during (10/1-10/10), and after national holidays (2005, Mingpao News)

For More Information

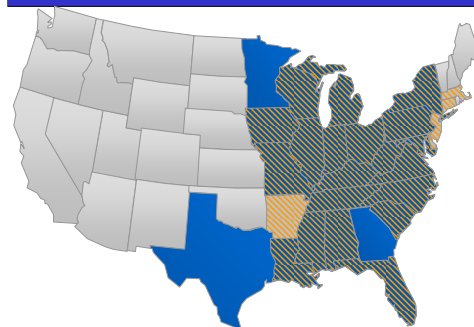
Contact: schreifels.jeremy@epa.gov

Website: <http://www.epa.gov/airmarkets>

- Information on the acid rain, ozone transport, PM2.5, and mercury programs
- Studies and reports
- Policy design guidebooks



CAIR: Affected Region and Emission Caps



CAIR Emission Caps (million metric tons)

	2010	2015
SO ₂	3.27	2.27
NO _x (annual)	1.36	1.18
NO _x (summer)	0.53	0.44

- States not covered by CAIR
- States controlled for fine particles (annual SO₂ and NO_x)
- States controlled for both fine particles (annual SO₂ and NO_x) and ozone (ozone season NO_x)
- States controlled for ozone (ozone season NO_x)



Economic Growth & Environmental Improvement

Power Plant SO₂, NO_x, and Mercury Emissions vs. GDP

