The End of the “Grand Policy Experiment”
The National SO2 Trading Program

October 2011

THE SO$_2$ TRADING PROGRAM

1990: Title IV of the 1990 U.S. Clean Air Act established trading
1995: Phase I (374 large units)
2000: Phase II (1,420 more units)

SO$_2$ Trading Program

- National Cap with no spatial restrictions on trading.
  - By 2000 emissions were 40% lower than 1980 levels
- Continuous monitoring of emissions
  - 1 allowance used for each ton emitted
- Very low transaction costs
  - 0.1% in 1999

Rave reviews of the program

“The allowance trading program has had exceptionally positive welfare effects, with estimated benefits being as much as ten times greater than costs.”
  - Stavins (2005)

“The EPA and other governments have looked upon the Acid Rain Program as the standard of how a market-based system can control emissions at reasonable cost.”
  - Tesoriero (2010)
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SO\textsubscript{2} Spot Prices & trade volume 2009-present

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EPA rules 28 states and DC contribute to nonattainment in downwind states.

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Clean Air Interstate Rule (CAIR)

Regional caps

Reduced aggregate cap

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Sources install controls

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2008. CAIR does not comply with the Clean Air Act, which “requires states to limit emissions from sources that contribute significantly to nonattainment ... in downwind states.”
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SO2 Spot Prices 2008-present

How did this happen?

- SO2 is not uniformly distributed.

- Pre implementation analysis ignored:
  - Effect of trading on ozone levels.
  - Effects on regional non-attainment problems.

What do we learn from the SO2 experience?

- Pollution problems are rarely if ever as easy as the simple textbook model.
  - Spatial heterogeneity
  - Interactions with other pollutants and pollution problems

  - Ignoring physical and legal realities is unlikely to work forever.

What’s the future for SO2 Trading?

- EPA finalized new Cross-State Air Pollution Rule (CSAPR) in July, 2011 to be implemented in 2012.
- Sets up 4 trading programs:
  - SO2 in states where more reductions needed
  - SO2 in states needing less reductions
  - Annual NOx emissions
  - Seasonal NOx emissions

- Cap on emissions at the state level.
- The end of the national SO2 trading program, but not necessarily the end of SO2 trading.
References

- McLean, Brian. U.S. Environmental Protection Agency. Comments during a roundtable discussion, “What Do and Don’t We Know About Tradable Permit Systems?” at the Workshop on Market-Based Instruments for Environmental Protection, Massachusetts, July 18-20, 1999. Cambridge, MA.