

Air Quality Management

China City Mobilization Workshop

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USEPA

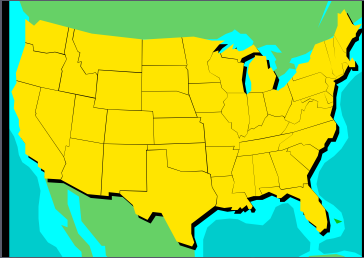
Beijing, China

U.S. Air Quality Management Process



Federal-Regional-State Roles

FEDERAL



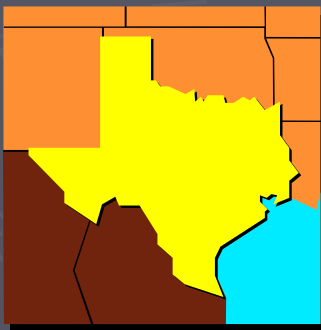
- ▶ National standards, rules, and enforcement
- ▶ Consistency of policies and programs
- ▶ Technical guidance
- ▶ Report on progress in reducing air pollution
- ▶ Ultimate authority & accountability

REGIONAL



- ▶ Conduct assessment and characterization
- ▶ Help develop multi-state strategies and trading programs
- ▶ Regional planning/coordination for implementation of national programs

STATE



- ▶ State rules
- ▶ Source Permits
- ▶ Compliance & enforcement
- ▶ Implementation Plans
- ▶ Implement national rules & guidance
- ▶ Monitoring, modeling, emission inventories

National Ambient Air Quality Standards

- ▶ Clean Air Act requires establishment of primary National Ambient Air Quality Standards (NAAQS) that "are requisite to protect the public health"
 - Need to protect sensitive subgroups
- ▶ Different considerations apply to setting NAAQS than to achieving them
 - Setting NAAQS: health and environmental effects
 - Achieving NAAQS: account for cost, technical feasibility, time needed to attain

Establish Standards

US Air Quality Standards

	1° Standard	2° Standard
<i>Carbon Monoxide</i>	9 ppm/10 mg/m ³ (1 hr) 35 ppm/40 mg/m ³ (8 hr)	None
<i>Lead</i>	1.5 ug/m ³ (quarterly)	Same as primary
<i>Nitrogen dioxide</i>	0.053 ppm/100 ug/m ³ (annual)	Same as primary
<i>PM10</i>	50 ug/m ³ (annual) 150 ug/m ³ (24 hr)	Same as primary
<i>PM2.5</i>	15 ug/m ³ (annual) 65 ug/m ³ (24 hr)	None
<i>Ozone</i>	0.08 ppm (8 hr)	Same as primary
<i>Sulfur Dioxide</i>	0.03 ppm (annual) 0.14 ppm (24 hr)	0.5 ppm (3 hr)

Air Quality Management Cycle

ESTABLISH GOALS

70's: .08 ppm ozone & TSP

80's: .12 ppm ozone & PM-10

Now: .08 ppm ozone & PM-2.5

EVALUATE RESULTS

- Trends Analysis
- Attainment demo's
- Expanded public information:

* AQI

* AIRNow

WHAT REDUCTIONS ARE NECESSARY?

-- Monitors: better job with fewer monitors

-- Inventories: improved factors with 90, 96, 99, 02 inventories

-- Modeling: EKMA > UAMV > CMAQ

HOW TO ACHIEVE

-- 1970: NSPS, FMVCP

-- 1977: Nonattainment designations, PSD, Auto I/M

-- 1990: More nonattainment, Market Based program for SO₂, Mobile source controls, Fuels, MACT, CAIR

IMPLEMENT

-- Voluntary programs

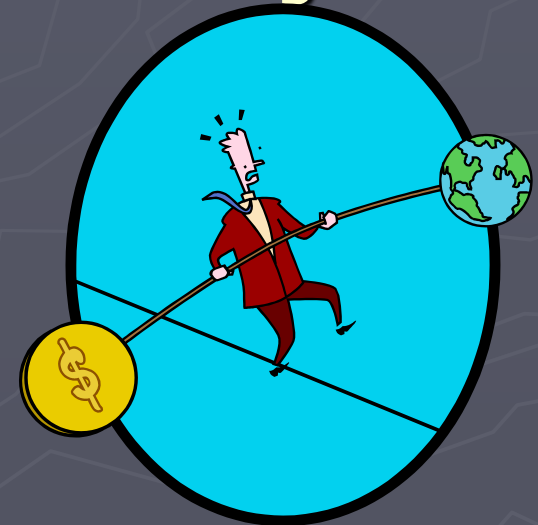
-- SIP credits

-- Regional approaches

-- Innovative State and local measures

Some Major Issues

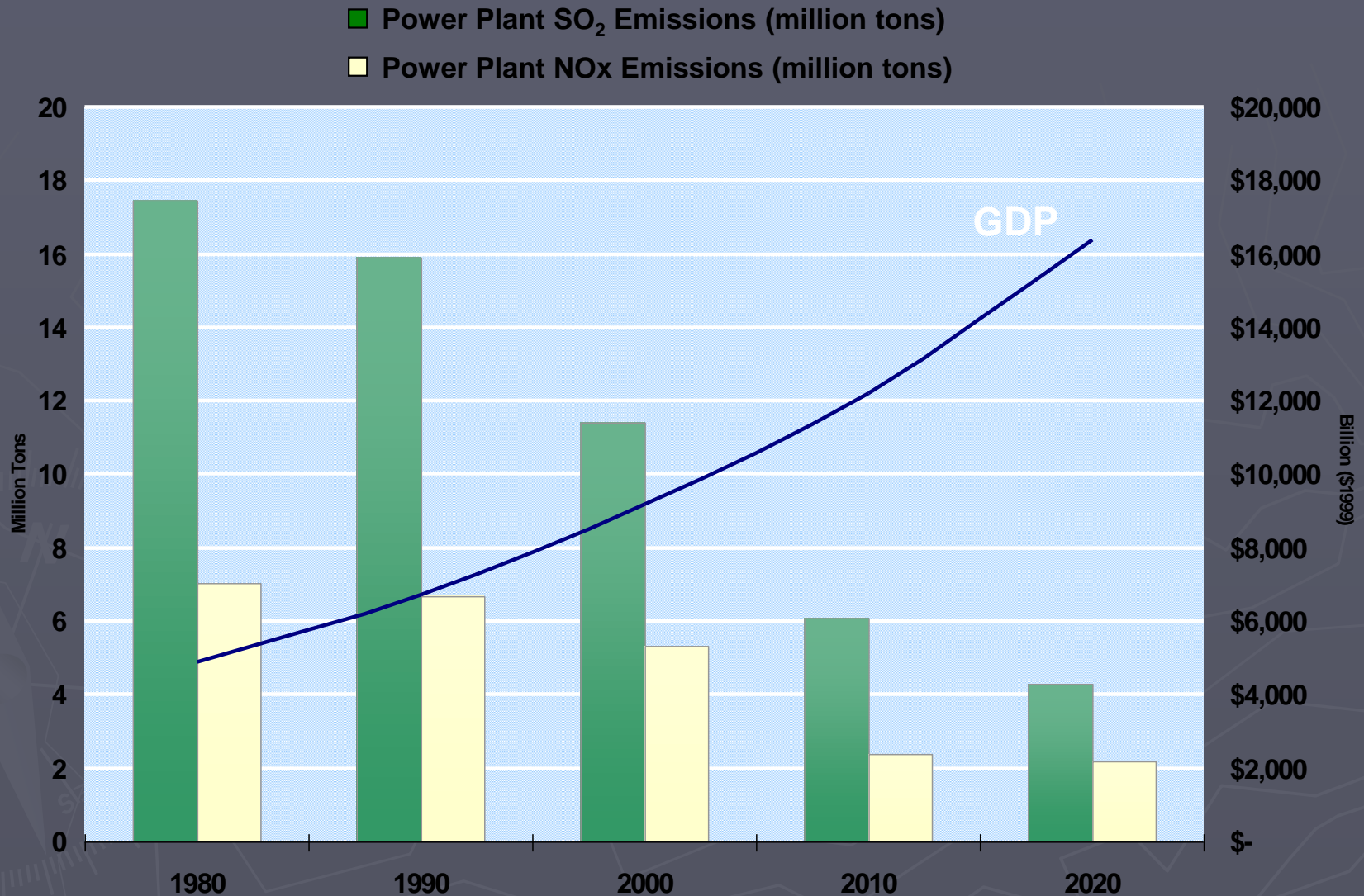
- ▶ Regional and international transport of air pollution
- ▶ Effective market-based approaches for reducing air pollution
- ▶ Evaluating, communicating, and reducing risk to public health from air toxics
- ▶ Multi-pollutant effects
- ▶ Multi-media approaches
- ▶ Balancing “carrot and stick” in our regulations & programs



Citizen Involvement

- ▶ Public Participation
 - Hearings on Rules/Permits
 - Comment Periods on Proposed Rules
 - Workshops
- ▶ Administrative Review
 - Agency Review Boards
- ▶ Legal Review
 - State Courts
 - Federal Courts

Economic Growth & Environmental Improvement



Sources: 1980 - 1999 emissions data are from the National Air Pollutant Emissions Trend Report (EPA, March 2000). Projections for SO₂, NO_x and mercury are derived from the Integrated Planning Model (IPM). GDP data for 1980 - 2000 is from the Bureau of Economic Analysis, U.S. Department of Commerce. The GDP projection for 2010 is from OMB's Analytical Perspectives Report for 2003, Table 2-1. The 2010 to 2020 projection follows EIA's assumptions in AEO 2001 of 3% growth per year.

Summary

- ▶ Air Quality Standards/Goals and Timelines are key
- ▶ Technical Tools and Information are essential
- ▶ Air Quality Management Process is iterative and adaptable
- ▶ Transparency is important to maintain credibility
- ▶ Focus on results not just process