

# Continuing Improvement In Air Quality

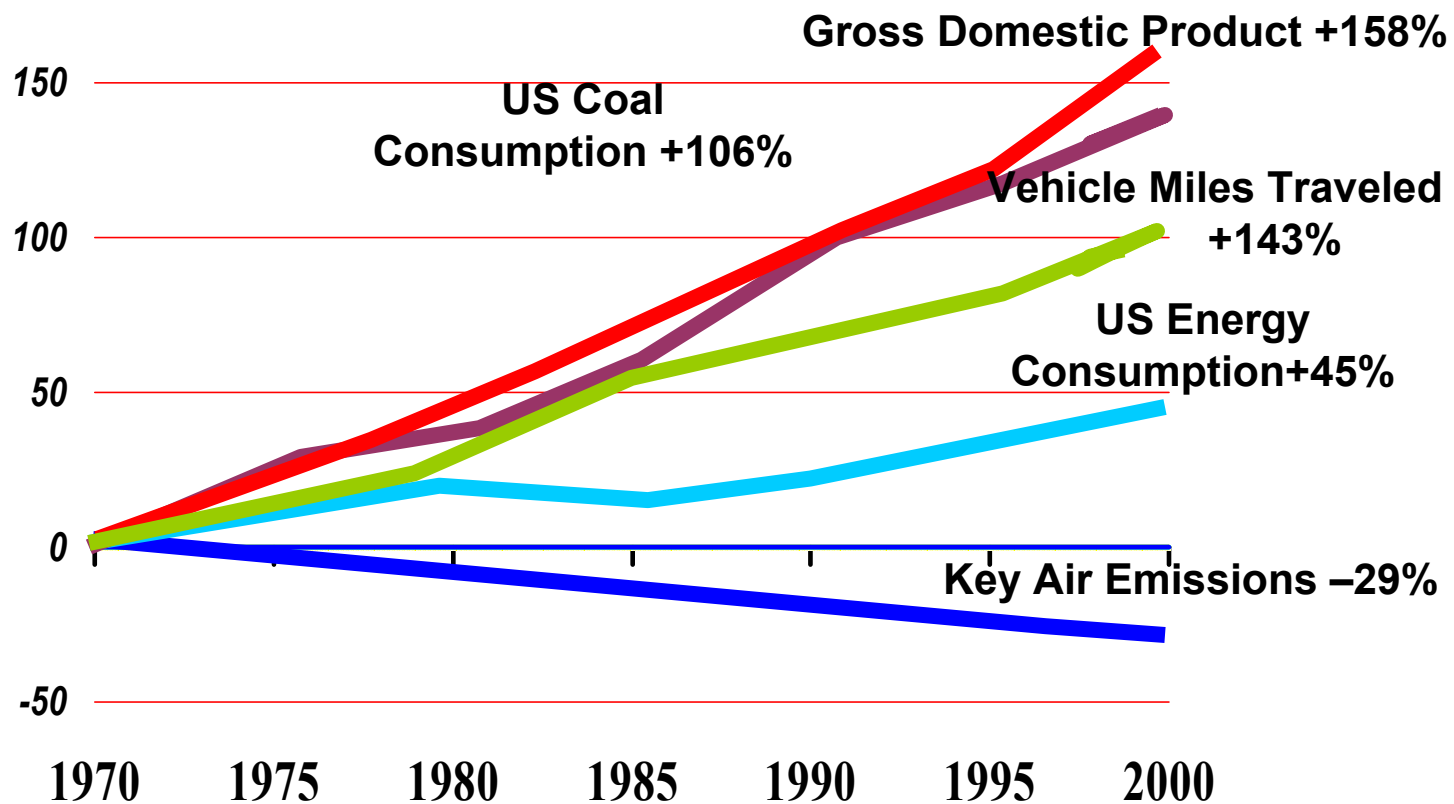
Unions for Jobs and the Environment (UJAE)

March 15, 2002

# Charts

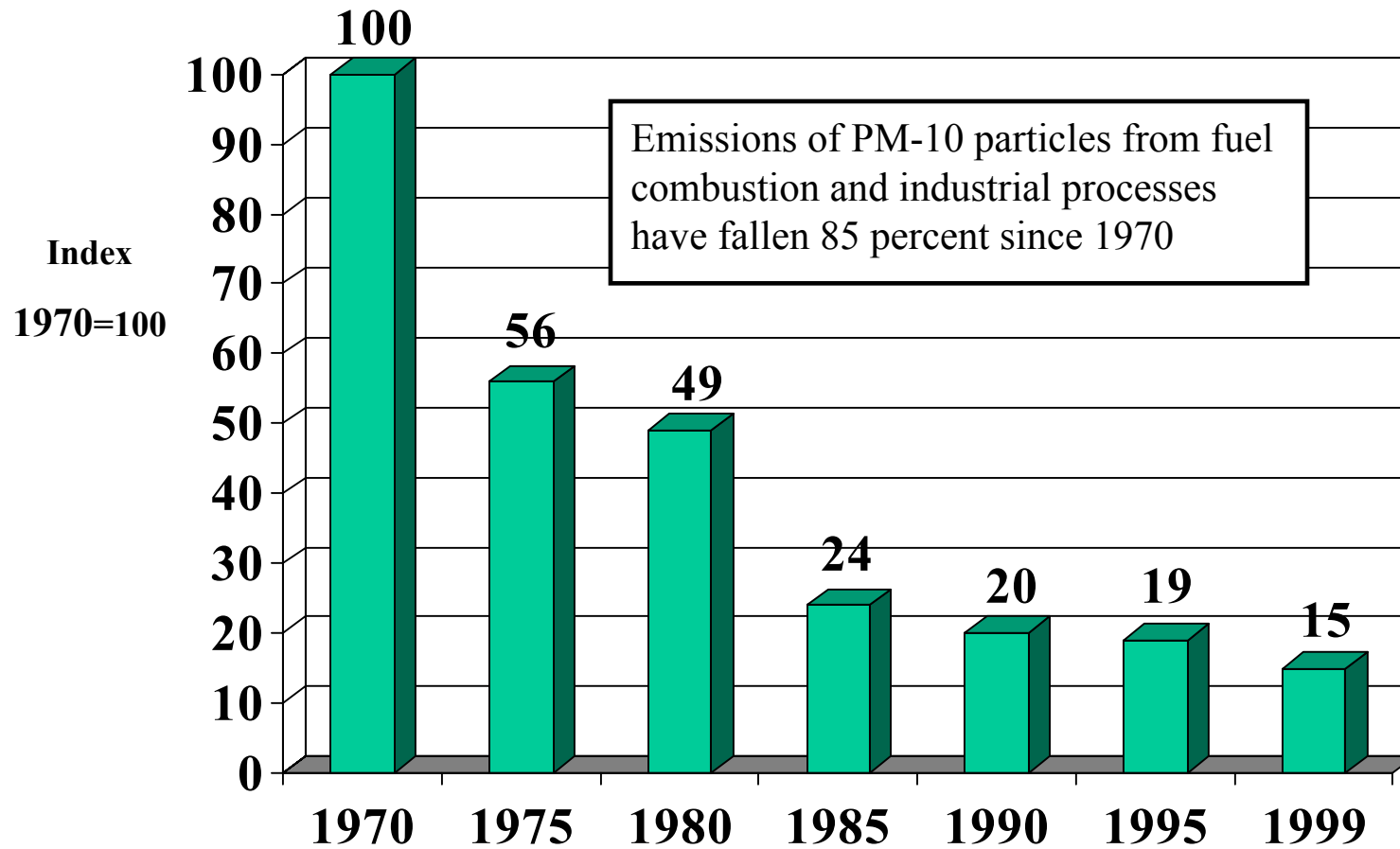
1. Energy consumption rises while the air gets cleaner
2. Particulates from fuel combustion
3. Sulfur dioxide (SO<sub>2</sub>)
4. Nitrogen oxides (NO<sub>x</sub>)
5. Carbon monoxide (CO)
6. Volatile organic compounds
7. Lead
8. Past and future power plant emissions  
of SO<sub>2</sub> and NO<sub>x</sub>
9. Goal for reductions in mercury emissions

## Cleaner Air: Energy consumption rises While Emissions decline



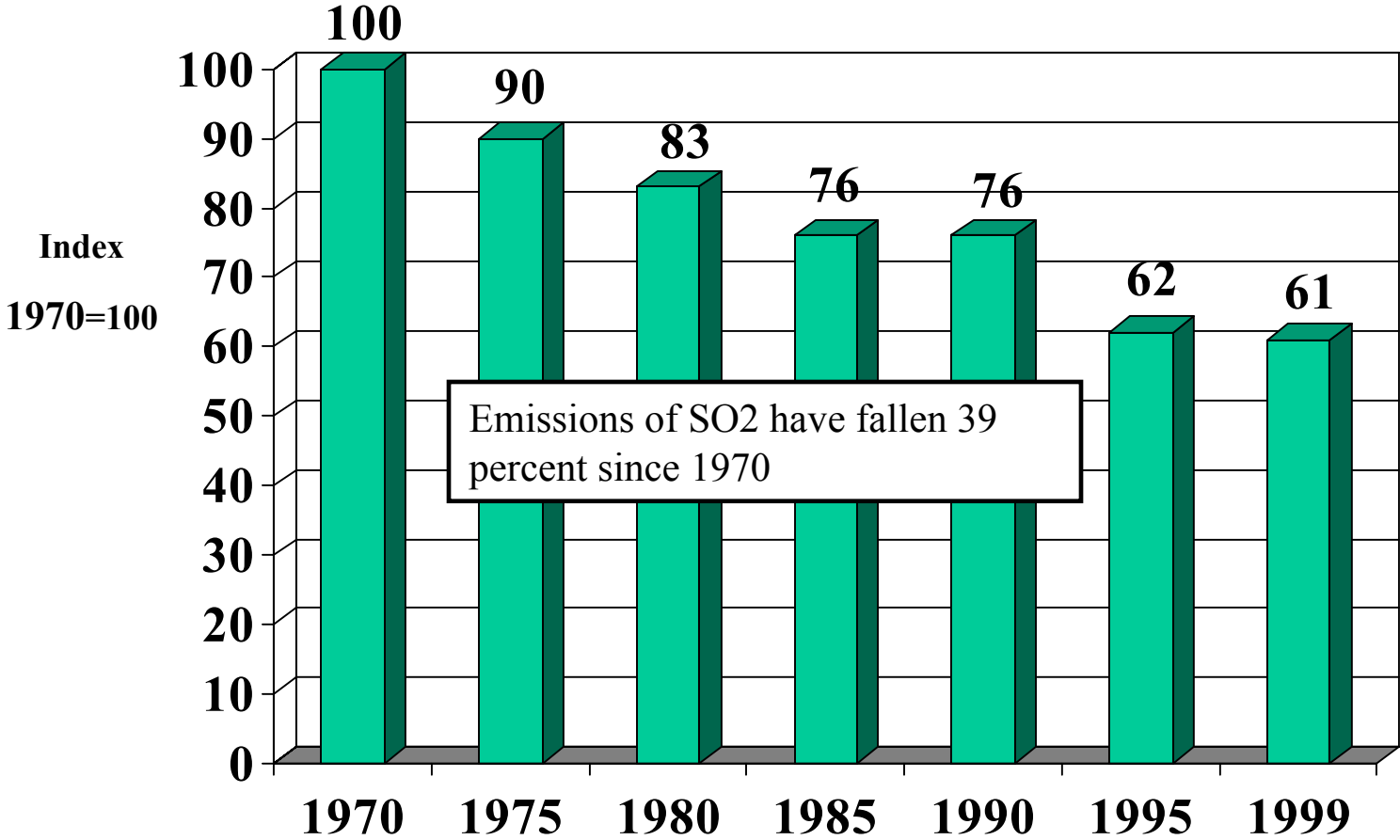
Source: EPA: Key emissions are the six principle air pollutants including SO<sub>2</sub>, NO<sub>x</sub>, mercury, carbon monoxide, lead and volatile organic compounds.

## Particulates from fuel combustion and industrial processes



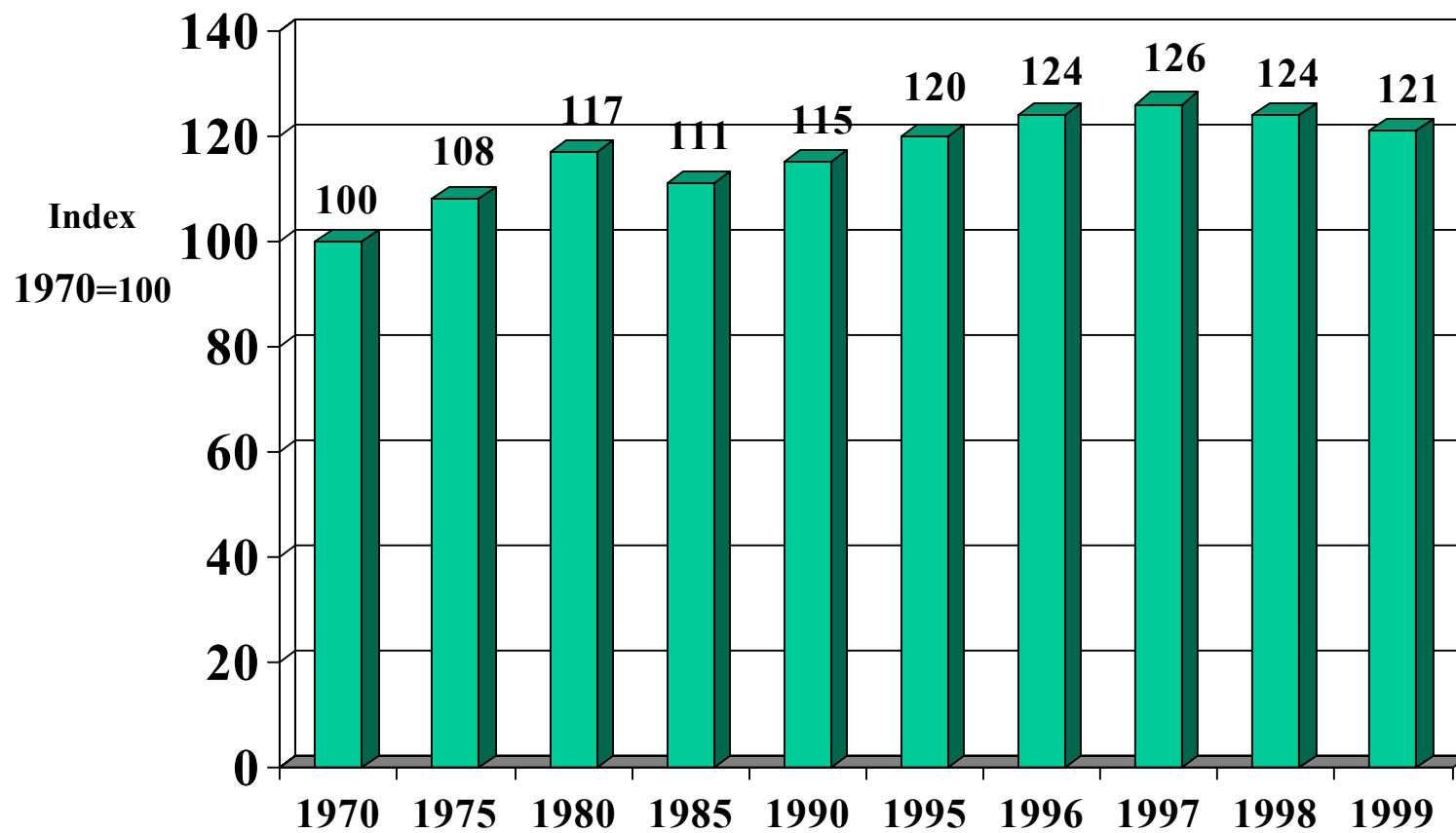
Source: EPA

# Emissions of sulfur dioxide show a marked improvement compared with 1970



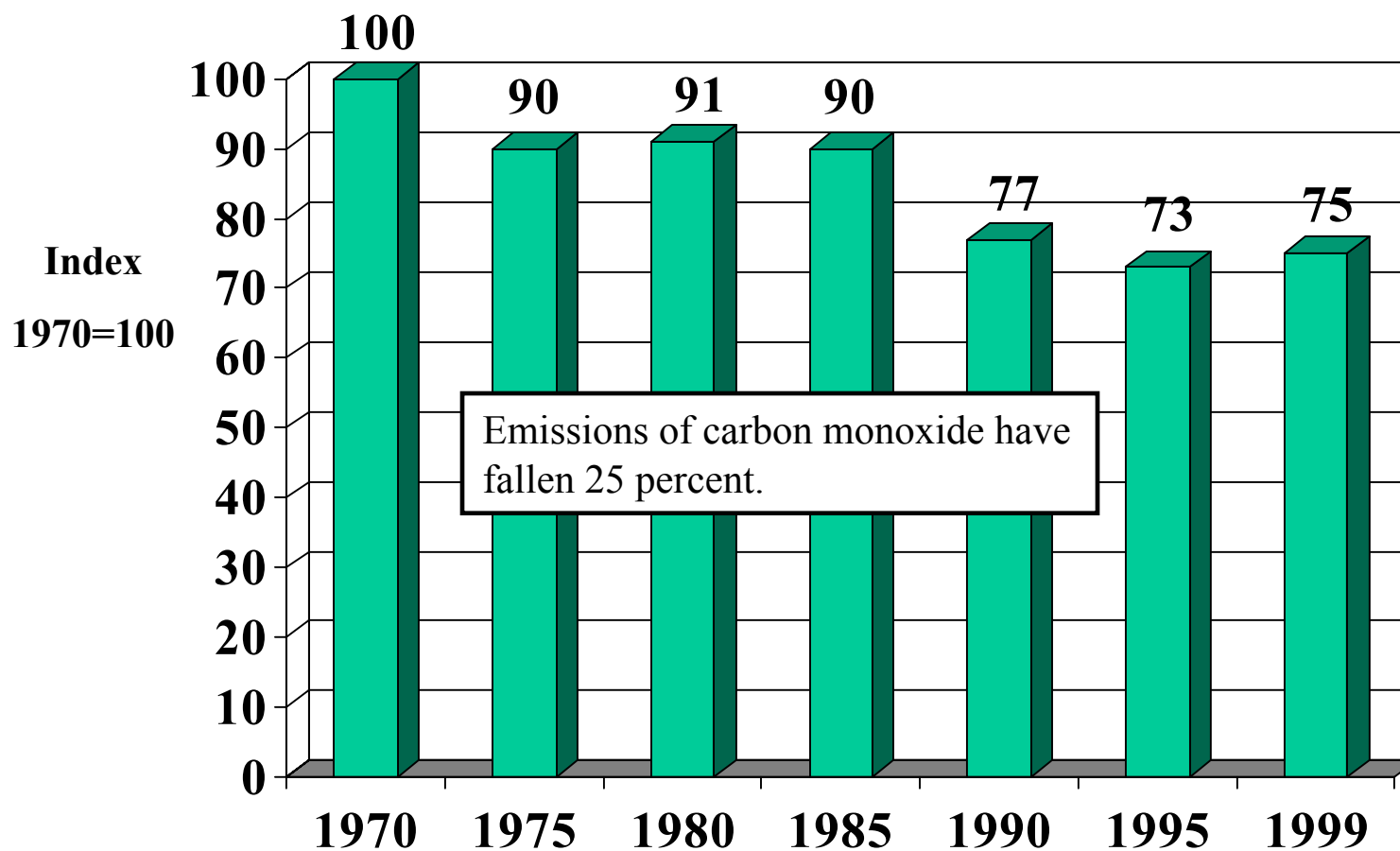
Source: EPA

## Emissions of nitrogen oxides have stabilized



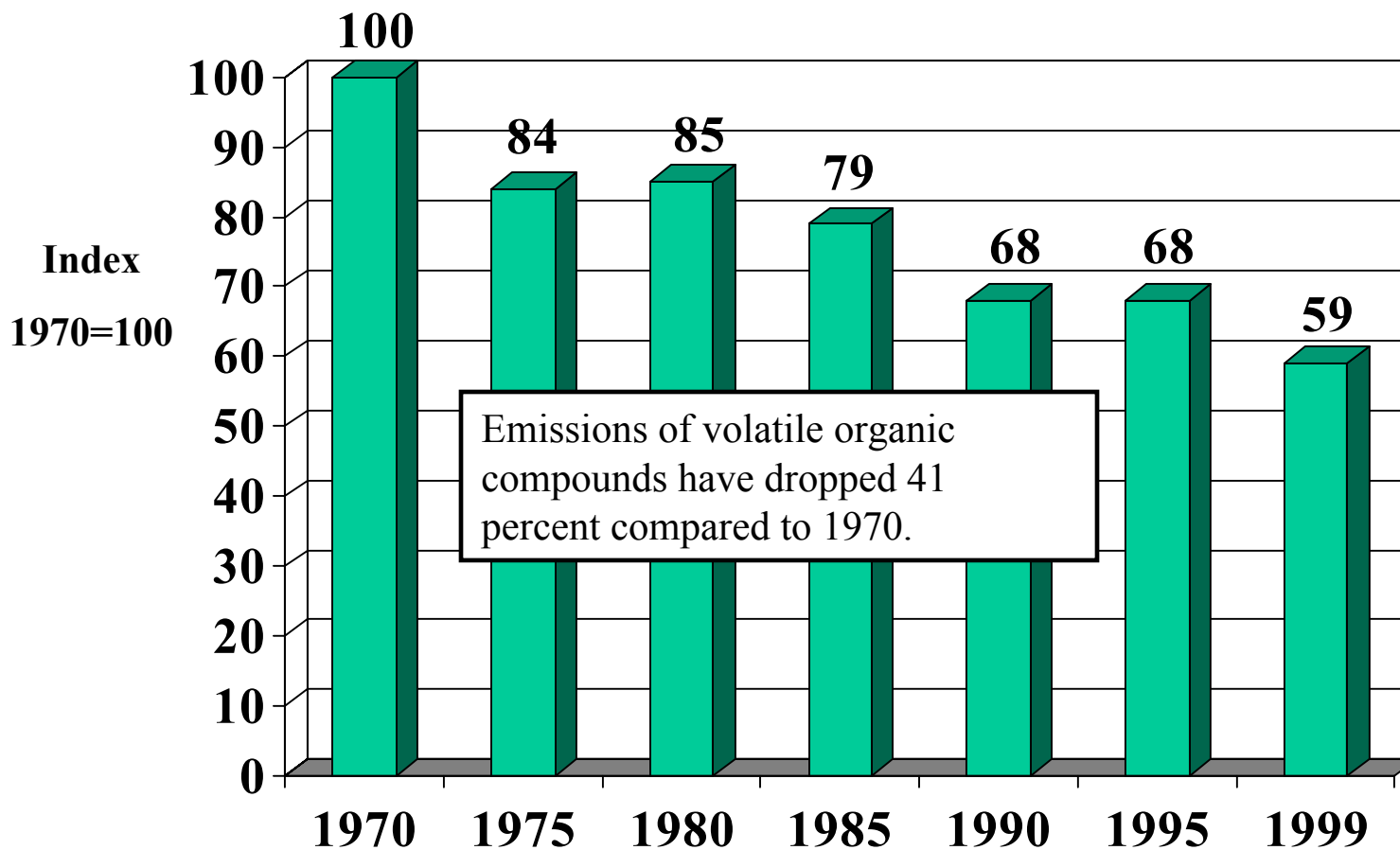
Source: EPA

## Emissions of carbon monoxide have fallen



Source: EPA

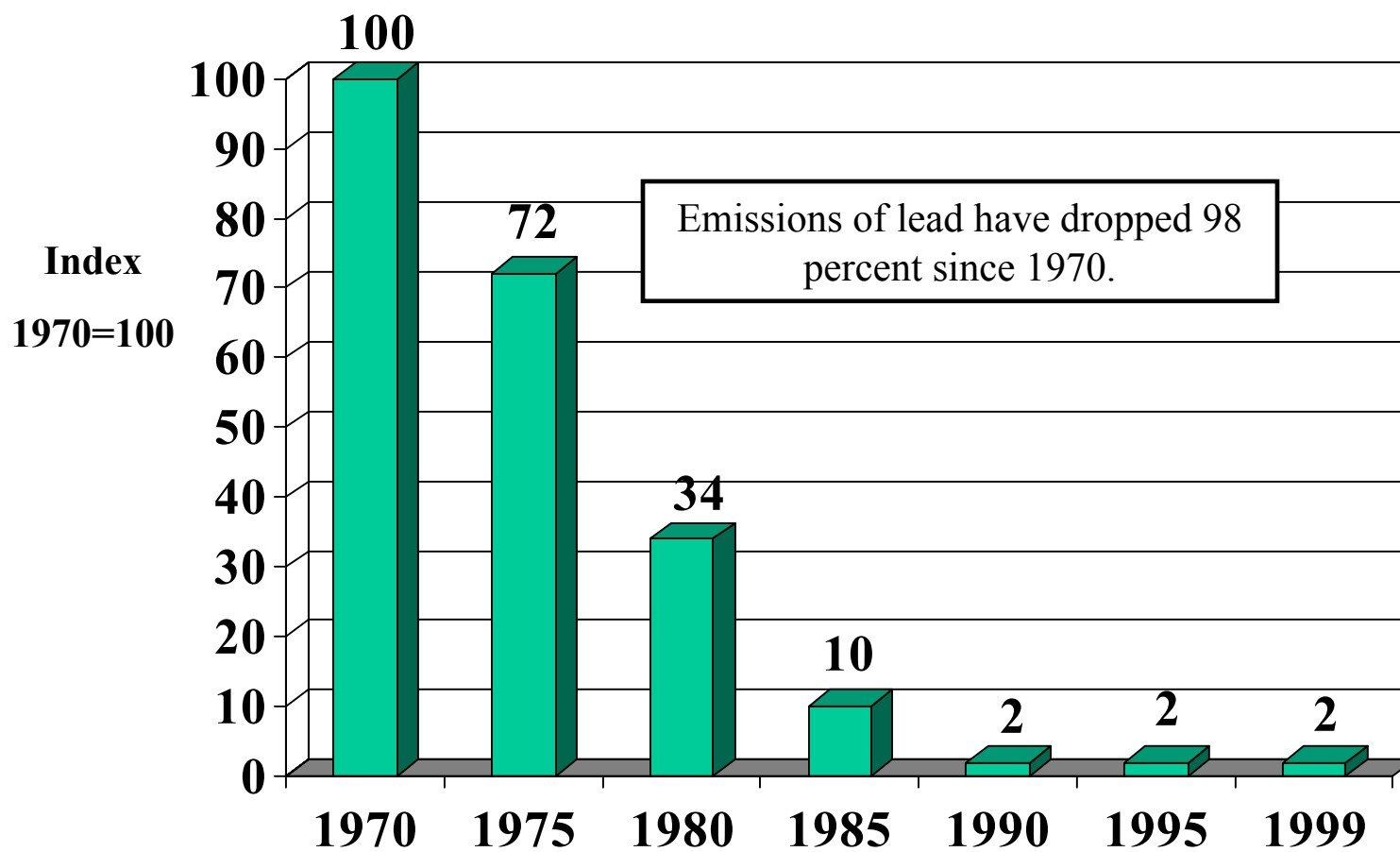
## Emissions of volatile organic compounds are down significantly from 1970



Source: EPA



## Dramatic drop in emissions of lead



Source: EPA

## Sources of regulated emissions

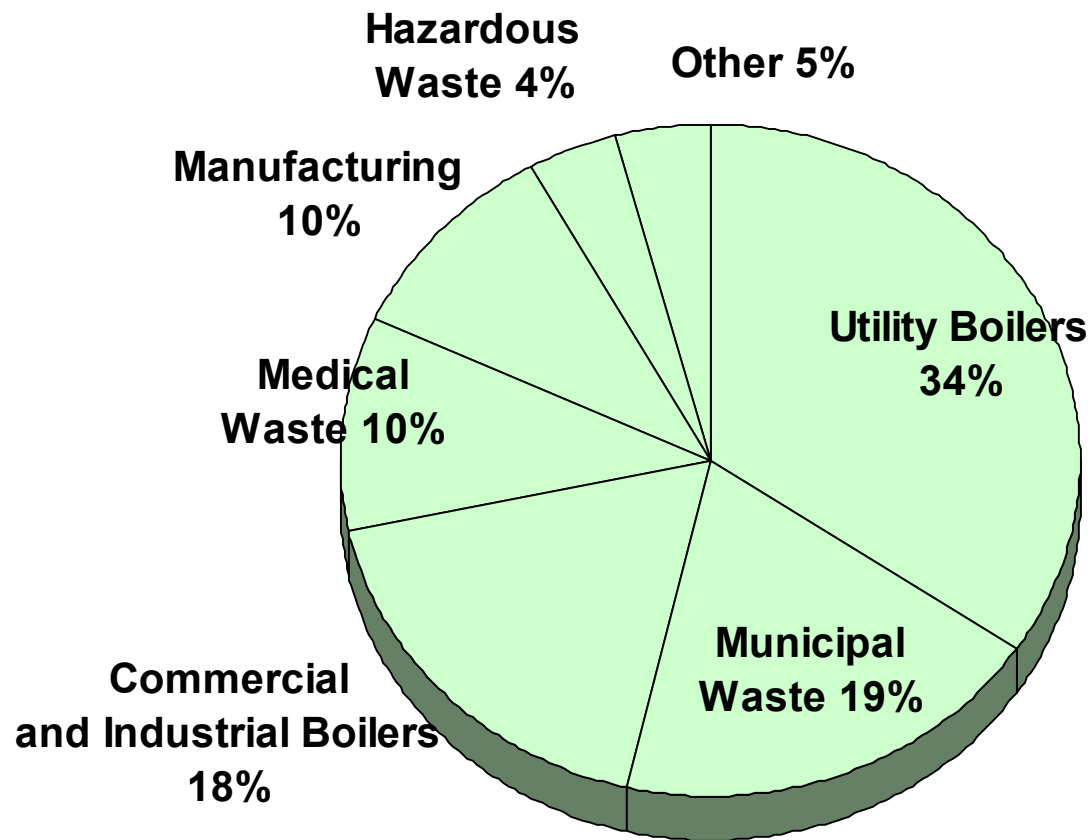
Source	Particulates	Sulfur Dioxide	Nitrogen Oxides	Volatile Organics	Carbon Monoxide	Lead
Industrial	2%	22%	15%	9%	5%	59%
Electric Utilities	1%	67%	25%	0%	0%	2%
Residential	1%	1%	3%	4%	4%	0%
Commercial	0%	2%	2%	0%	0%	10%
Transportation	1%	2%	32%	37%	56%	0%
Off Highway	1%	6%	22%	14%	22%	13%
Other*	93% *	0%	2%	36% **	11%	16%

\* Includes dust from unpaved roads 36%, agriculture and forestry 27%, wind erosion 15% and construction 13%.

\*\* Use of solvents including consumer solvents and surface coatings 29% and storage of gasoline and petroleum products at terminals and service stations 7%.

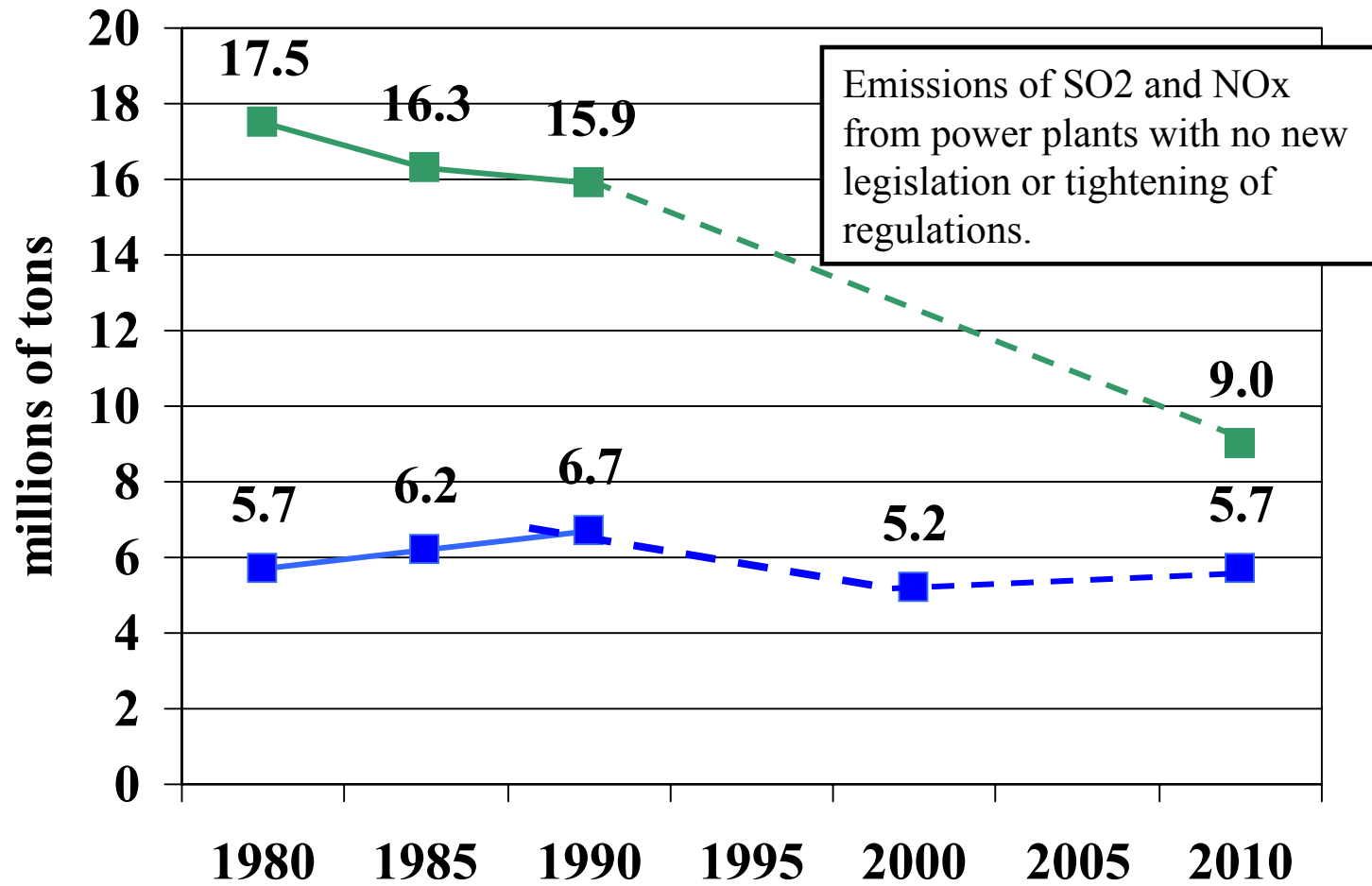
Source: EPA

# Sources of Mercury Emissions



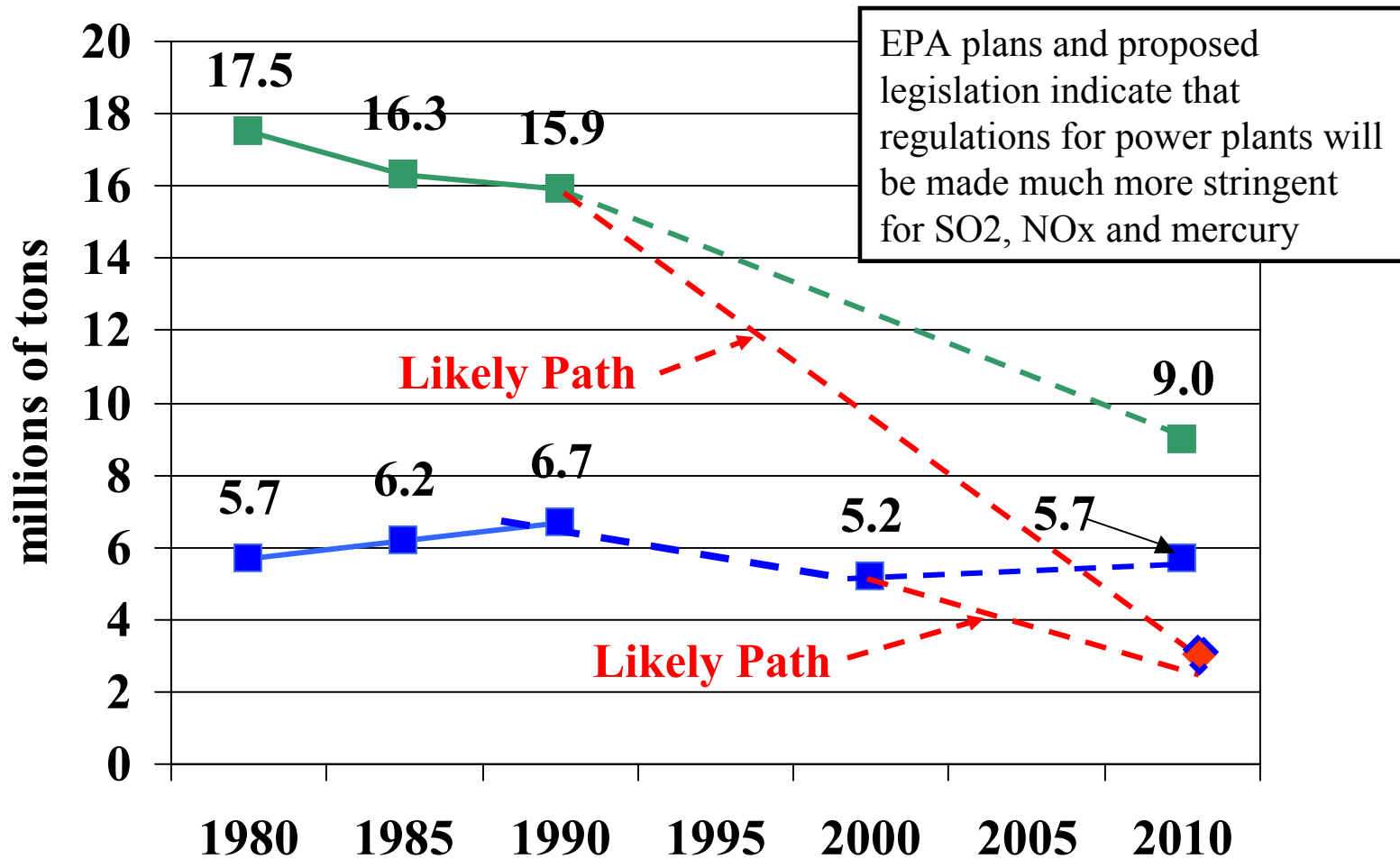
Source: EPA

**EPA projects a decline in sulfur dioxide  
But a slight increase in nitrogen oxide  
during this decade from electric power plants**



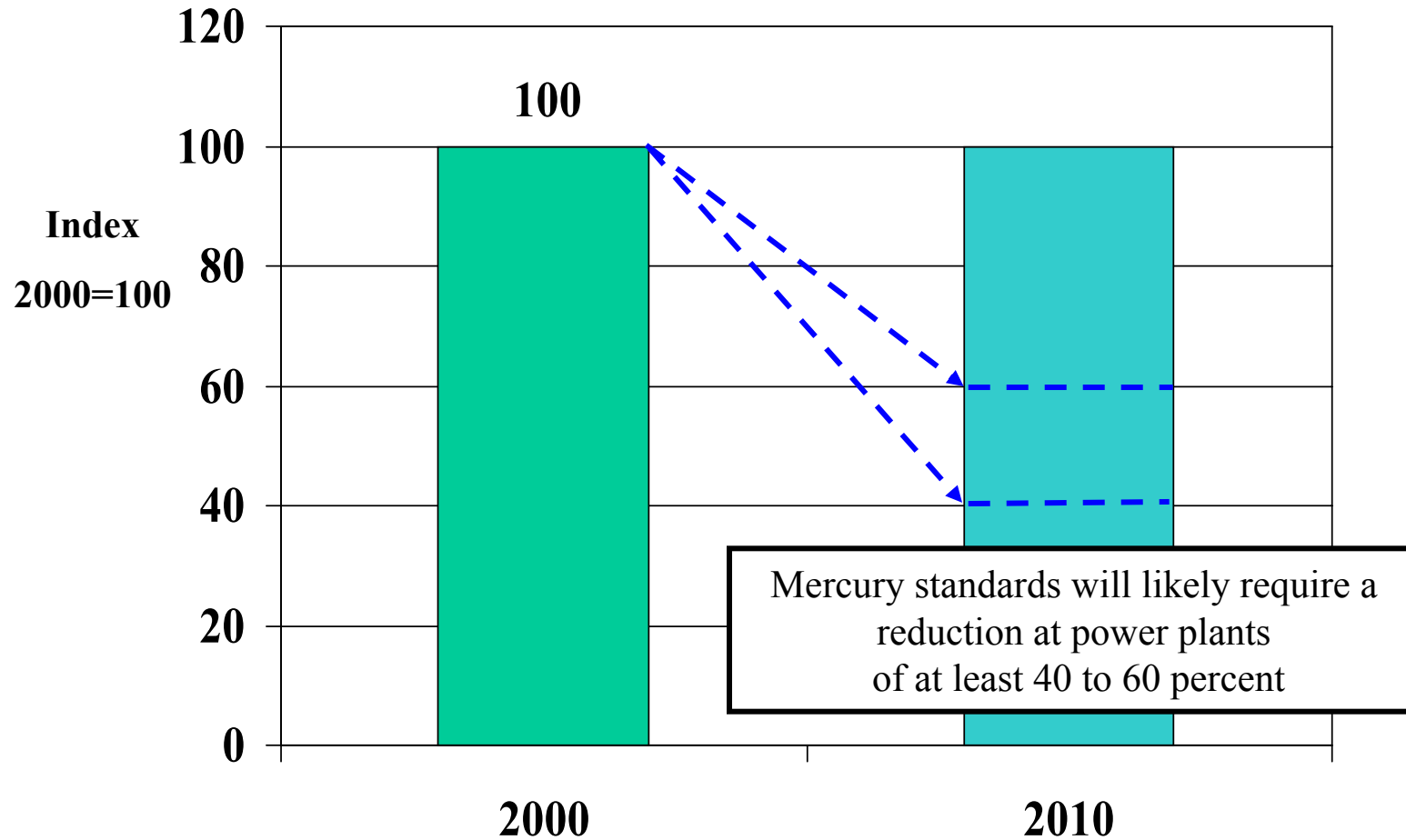
Source: EPA

## Actual emissions from power plants will be significantly below the EPA forecast



Source: EPA

## Mercury emissions will come under regulation in the near future



## **Summary of air emission improvements:**

1. Particulates from fuel burning – will continue to decline due to more efficient power plants and new technology.
2. Particulates from other sources – will decline with new farming methods and programs to prevent erosion.
3. Sulfur dioxide and nitrogen oxides will continue to decline due to new control technologies.
4. Carbon monoxide – will decline with more efficient combustion technologies.
5. Volatile organic compounds – Will decline due to better containment
6. Lead – will remain at the greatly reduced level
7. Mercury – will be greatly reduced due to expected new regulatory program.

## **Policies needed to continue air emission improvements and a healthy economy**

- Ensure that regulations are in line with available technology
- Maintain the nations fuel diversity
- Do not consider CO<sub>2</sub> emissions in the same legislation as goals for SO<sub>2</sub>, NO<sub>x</sub>, and Mercury