Proposals for Multi-emission Legislation To Reduce Emissions of SO2, NOx, Mercury and CO2

Presentation for the Massachusetts Department of Environmental Protection
Mercury Standards Technology Feasibility Meeting, October 11, 2002

Unions for Jobs and the Environment (UJAE)

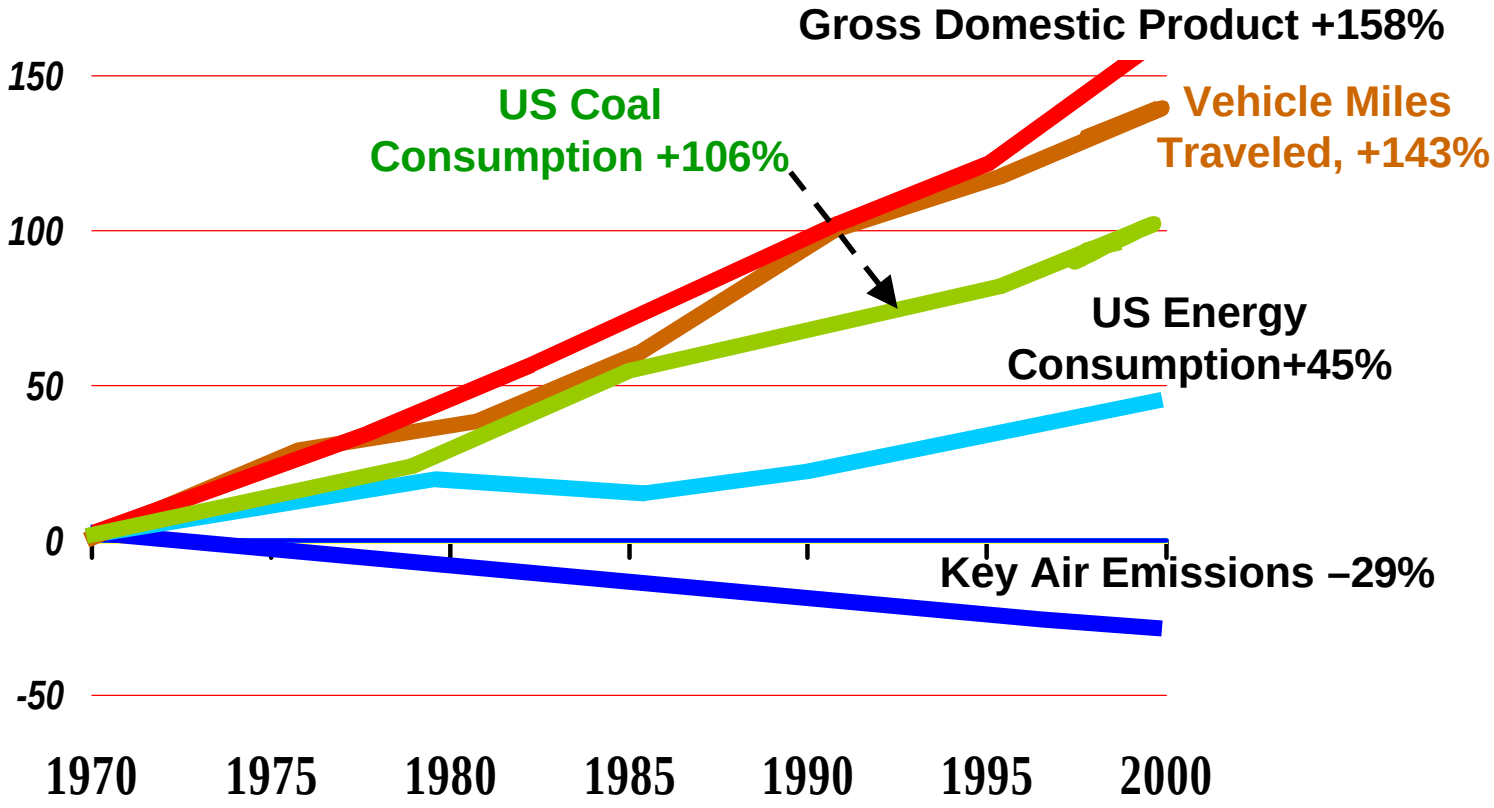
UJAE Goal

1. Bring about consensus among labor unions on targets and timetables for reducing sulfur dioxide (SO2), nitrogen oxides (NOx), Mercury and Carbon Dioxide (CO2).

Why is a reasonable multi-emission bill be desirable?

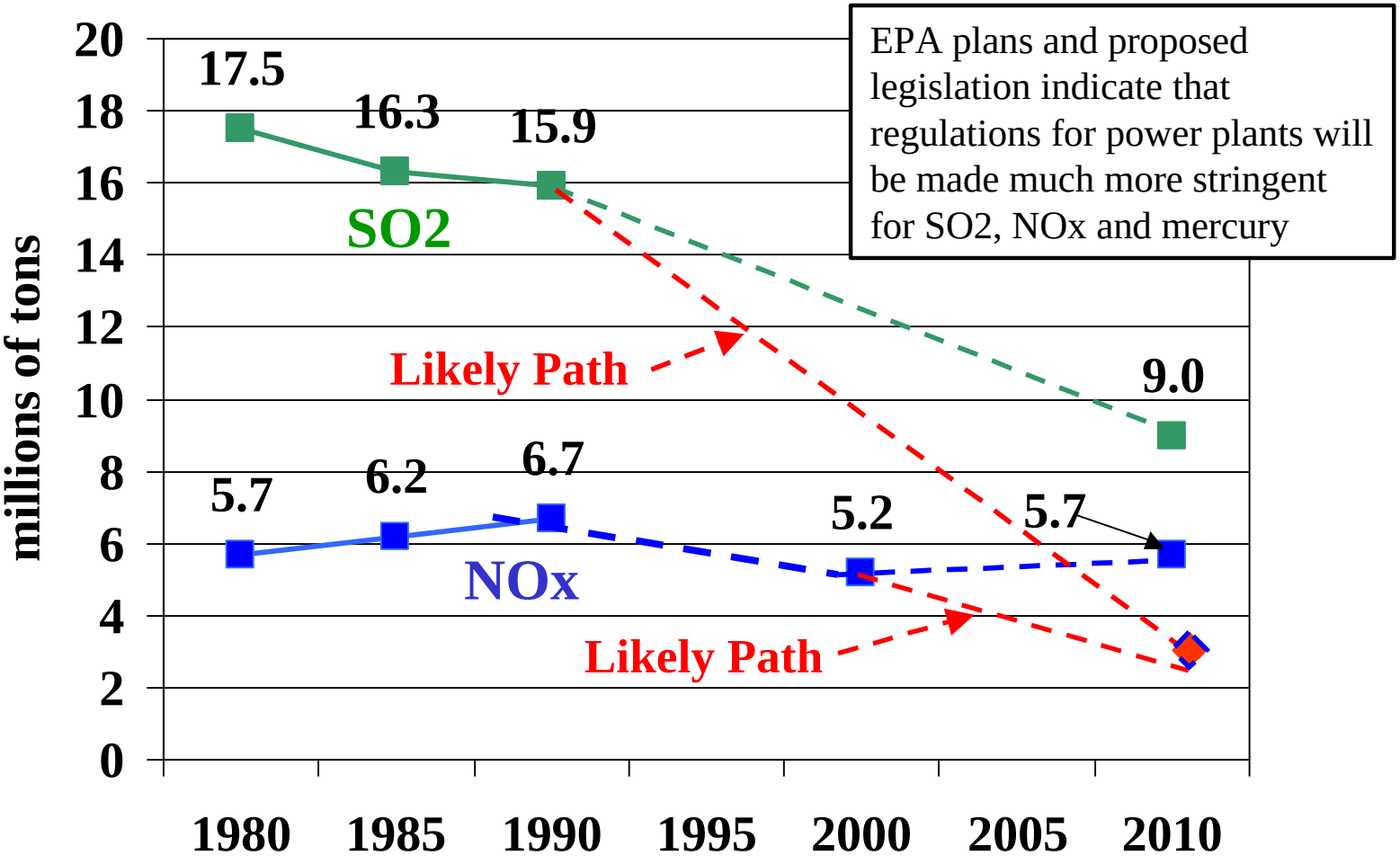
1. Multi-emissions approach is more efficient and less costly than setting standards for each emission independently.
2. New technology is available to further reduce emissions over the next decade.
3. More than 20 states have proposed 3e or 4e legislation. Federal legislation that sets forth uniform standards is better than a patchwork of regulations by state.

Cleaner Air: Energy consumption rises While Emissions decline



Source: EPA: Key emissions are the six principle air pollutants including SO2, NOx, mercury, carbon monoxide, lead and volatile organic compounds.

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

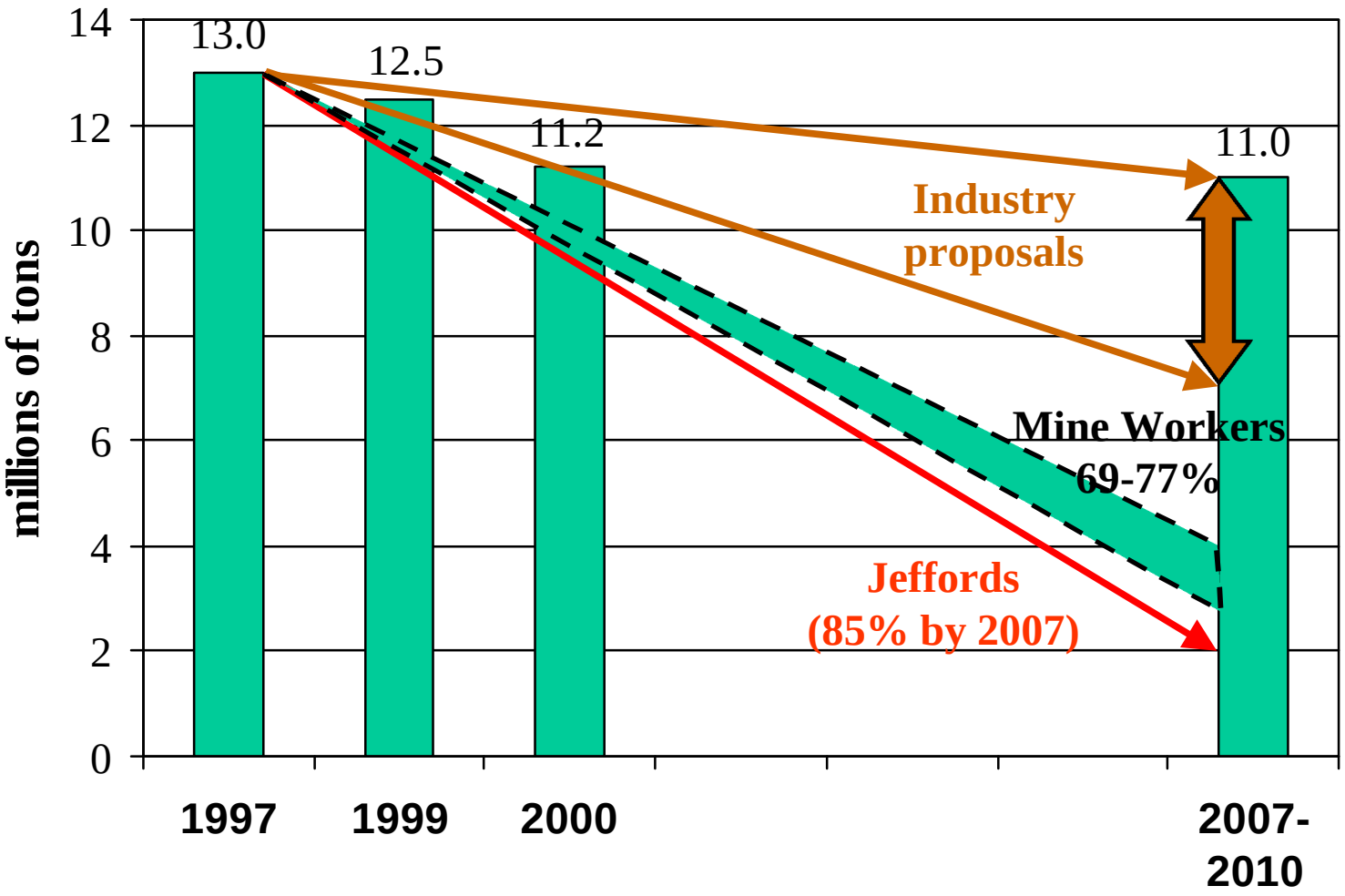


Source: EPA

Proposals for federal multi-emissions legislation

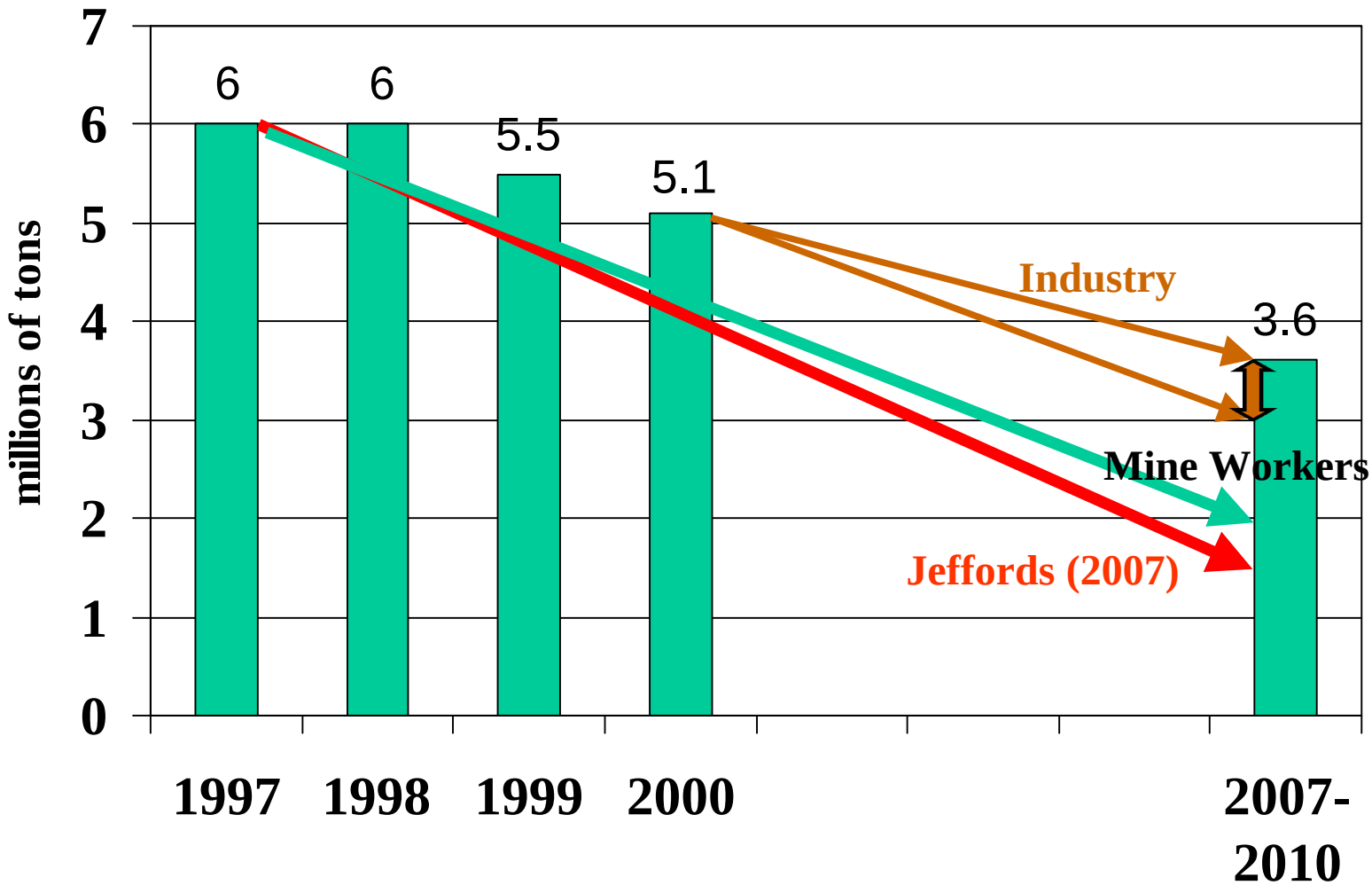
1. Jeffords Bill – Environmentalists' Position. (?)
2. Industry Positions – A range of proposals were put forth by industry groups.
3. Mine Workers Proposal - This plan is much more stringent than the industry proposals, but not as strict as those demanded by environmental groups.

Sulfur dioxide (SO2) targets

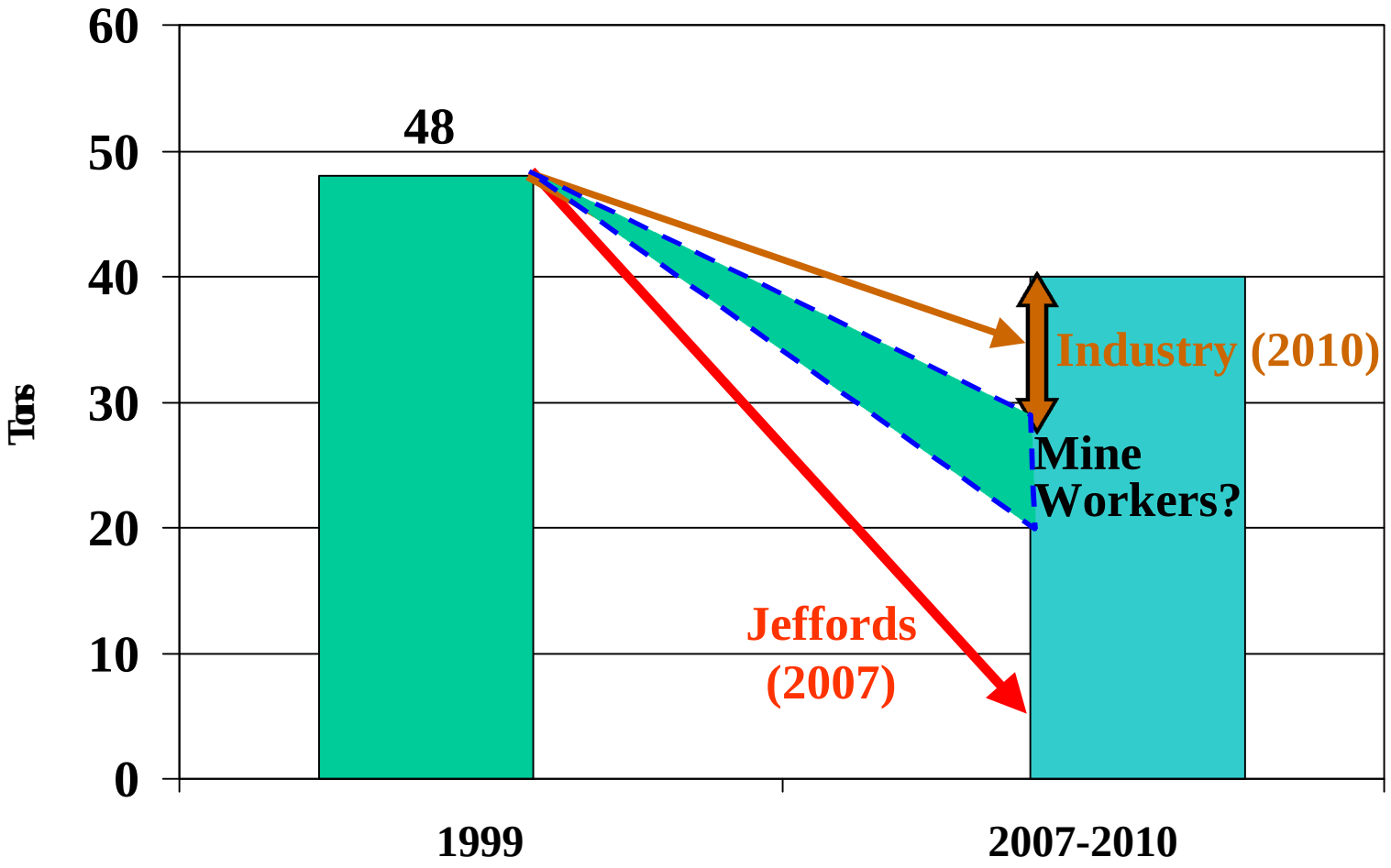


Note: Industry proposals do not include the Clean Energy Group whose targets are close to those of the Mine Workers.

Targets for nitrogen oxides (NOx)



Targets for mercury emission reduction



Note: Mine Workers expect a 40 to 60 percent reduction as co-benefits of SO2 reductions and recommend that mercury standards be postponed until the co-benefits are determined.

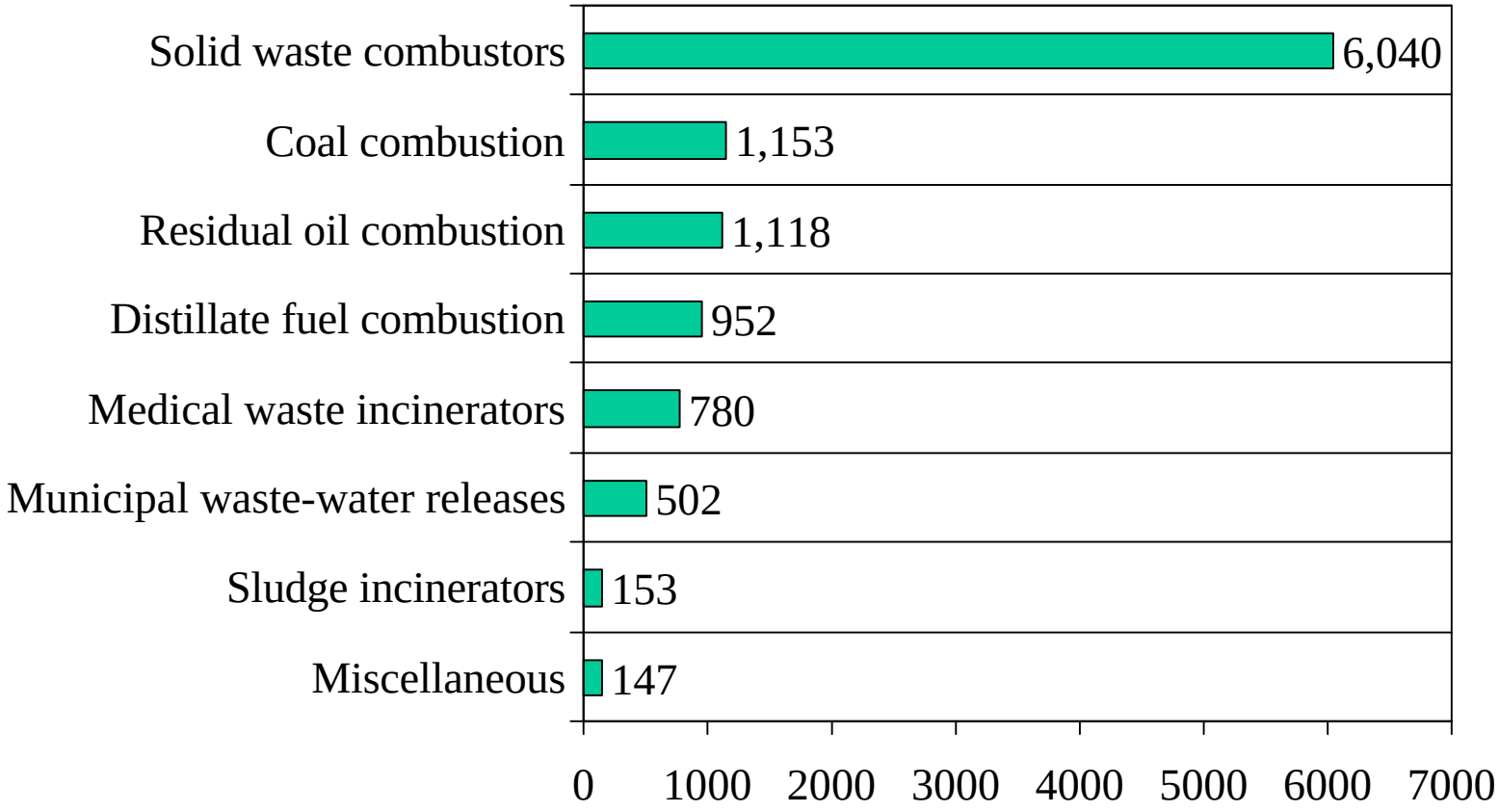
Labor Principles for State Multi-Emission Legislation

1. Fuel diversity needed to maintain reliability and reasonable cost.
2. Standards should not cause damage to industry or job losses.
3. Distribute controls across all responsible source sectors.
4. Integrate state emission trading programs within national programs.
5. Avoid plant or unit-specific standards which can lead to the closure of older, economically marginal facilities and the loss of jobs.
6. “Cap and trade” programs should be allocated to sources based on historic fuel use and emissions (“polluter pays” principle).
7. Mercury should be regulated through national programs because mercury emissions transported on continental and global scales.
8. For CO2, encourage voluntary reductions and reporting.
9. Allow regulated industries to recover reasonable costs for compliance.

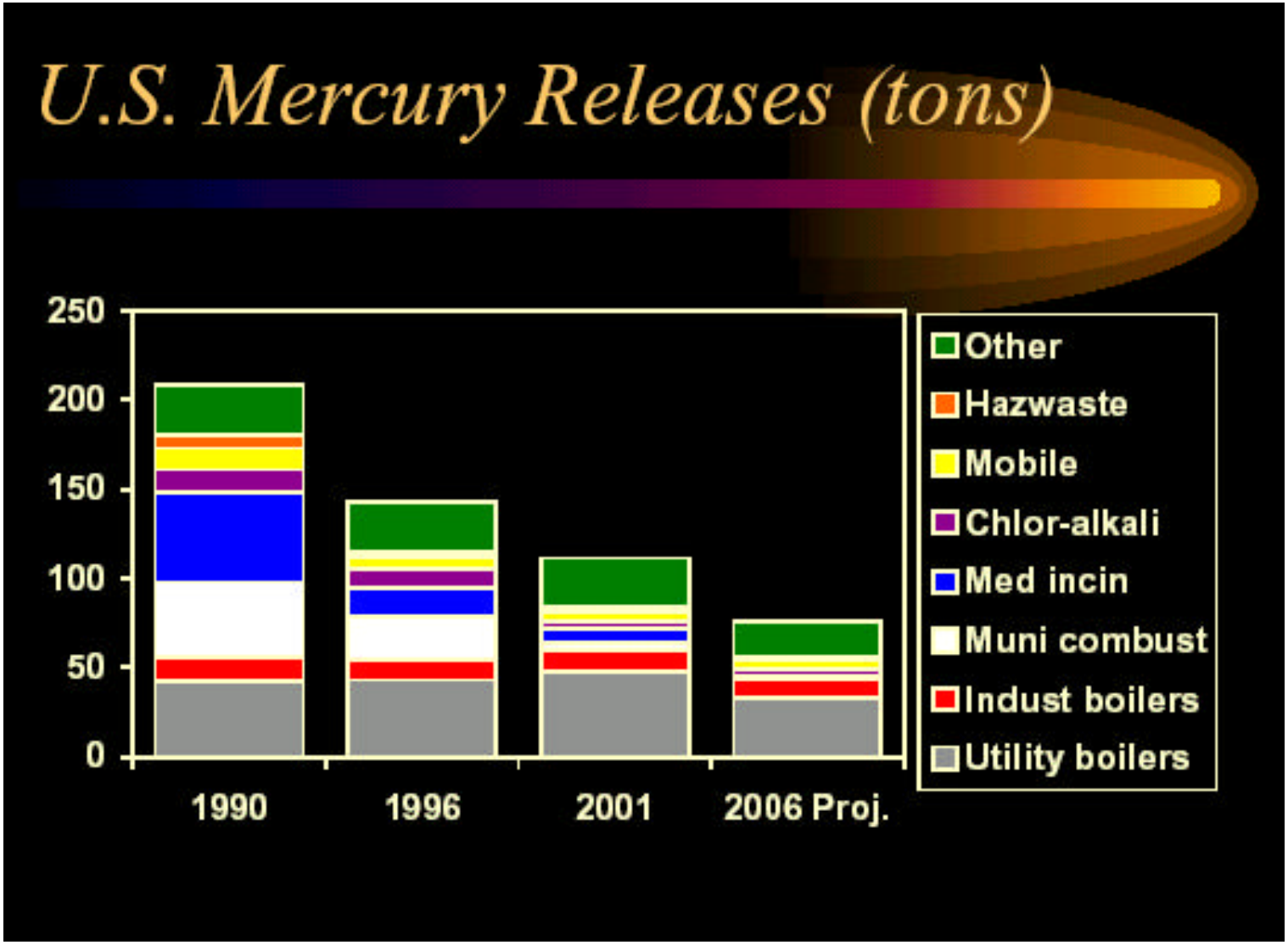
Direction of Mercury in the Environment

- The Massachusetts Department of Public Health (DPH) has advised the general public to refrain from or limit eating fish taken from many lakes and streams.
- None of Massachusetts public water supplies has been found to have unsafe levels of mercury.
- Mercury discharges nationwide cut in half from 1950 to 1990 and continued to fall in the 1990s.
- Past sources of industrial discharges of mercury into water have been eliminated. These include tanneries, paint factories and other industries.
- New federal emission standards for municipal solid waste combustors will reduce mercury emissions by 85 percent or more. Since the effort is national in scope, it will address both in-state sources and the transport of mercury pollution into Massachusetts from other states.

Mercury releases in Massachusetts (pounds released in 1995)



Note: DEP expects an 85% or more reduction from federal regulations for solid waste combustors.
Source: Massachusetts DEP


U.S. Mercury Releases (tons)
250
200
150
100
50
0
1990
1996
2001
2006 Proj.
Other
Hazwaste
Mobile
Chlor-alkali
Med incin
Muni combust
Indust boilers
Utility boilers

Source: EPA

Current trends in mercury releases

- Research is lacking, but indications are that lakes and streams may be recovering from past discharges.
- Powerplant emissions in Massachusetts are a very small share of nationwide emissions, and small compared to mercury pollution in the past.
- A substantial reduction in mercury emissions from powerplants will come as co-benefits of new regulations to reduce sulfur dioxide in Massachusetts.
- Federal mercury regulations for powerplants go into force December 2004.

Difficulties in controlling mercury

1. Mercury emissions into the air travel continentally and globally. Most of the mercury deposited in Massachusetts comes from out of state. …"*the mercury problem cannot be effectively addressed without coordinated regional, national and international efforts.*" (Massachusetts DEP)

2. Coal sources are highly variable in their mercury content. Some have proposed a dual strategy based on percent removal and emissions targets.

3. Measurement of mercury emissions getting better but still uncertain. Snapshots are taken of flue gases, but not sure these are representative of day-to-day operation.

Conclusions

1. Federal regulations mean it is not essential for Massachusetts to act on mercury emissions for powerplants.
2. National regulations will be much more effective than state regulations because of the long distance transport of mercury.
3. Requirements to measure and control mercury are improving, but have not yet been worked out.
4. Co-benefits for mercury are very large and should be measured before specific reductions for mercury are required.