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## **Rationalizing Air Pollution Regulation**

**Randall Lutter**

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Randall Lutter is a fellow with the AEI-Brookings Joint Center for Regulatory Studies and a resident scholar at the American Enterprise Institute (AEI). He can be contacted by e-mail at [rlutter@aei.org](mailto:rlutter@aei.org).

# Rationalizing Air Pollution Regulation

BY RANDALL LUTTER

*AEI-Brookings Joint Center for Regulatory Studies*

**T**HE NATION'S SPUTTERING AIR POLLUTION policies may soon receive a major overhaul. On Valentine's Day, President Bush proposed that Congress mandate deep cuts in the levels of sulfur dioxides (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and mercury emitted by U.S. electric power plants. Under the Bush "Clear Skies Initiative," SO<sub>2</sub> emissions would decrease from the current level of 11 million tons per year to three million in 2018, NO<sub>x</sub> would fall from five million tons to 1.7 million, and mercury from 48 tons to 15.

At the same time, the Bush administration supports phasing out the New Source Review (NSR) program, at least as it applies to facilities regulated by the new legislation. The program requires power plants, refineries, and other facilities to gain advance approval from federal environmental regulators that new investment projects and maintenance procedures will meet stringent emissions requirements. Though environmentalists and some members of Congress laud NSR, the program has drawn criticism because the costs and uncertainty of the lengthy approval process encourage energy producers to operate outmoded, minimally maintained plants instead of refurbishing them with more efficient and more environmentally benign equipment.

If lawmakers and the White House can resolve disagreements over how to address greenhouse gas emissions, they have an opportunity to forge a sensible compromise that would enable the passage of new NO<sub>x</sub>, SO<sub>2</sub>, and mercury caps while dumping NSR. But that process will not yield legislation that can be implemented in an economically sound

**Randall Lutter** is a resident scholar at the American Enterprise Institute (AEI) and a fellow with the AEI-Brookings Joint Center for Regulatory Studies. He can be contacted by e-mail at [rlutter@aei.org](mailto:rlutter@aei.org).

manner unless Congress and the administration pay attention to a few basic economic issues.

## STRINGENCY MATTERS

The Environmental Protection Agency is still preparing estimates of the benefits and costs of its proposed emissions caps — information essential to evaluate their stringency. Preliminary reports suggest, however, that the agency's analytic methods preclude identification of the best emissions caps. First, the estimates are not expected to take into account pending emissions cuts required by existing regulations. States already must cut emissions to meet the stringent air quality standards that EPA issued in 1997, yet EPA's analysis is likely to ignore the effects of the cuts, thereby overstating the benefits of the new emissions caps. Second, EPA's analysis is expected to include benefits from air cleaner than required by the 1997 standards. Because EPA claims its standards are requisite to protect public health with an adequate margin of safety, air quality improvements in areas that would otherwise meet the standard should not be used to justify costly new emissions cuts. EPA should provide an economic analysis that takes proper account of pending air quality improvements and discounts benefits that occur in areas that comply with its air quality standards. After considering that more sound analysis, Congress should set caps to maximize net benefits.

**Mercury** The benefits of reducing mercury emissions justify only very modest emissions caps. Research suggests that a severe mercury cut, like the one proposed by Sen. James Jeffords (I-Vt.) in legislation now before the Senate, would produce very small gains in public health but would boost electricity bills by more than a billion dollars per year.

Granted, some epidemiological studies suggest that children whose mothers ate very large quantities of mercury-contaminated fish while pregnant may experience subtle neurological problems. But very few women in the United States eat fish in quantities where significant neurological problems are of concern. Moreover, most contaminated fish consumed in the United States are ocean species, like swordfish and tuna, whose mercury levels are quite unlikely to respond to cuts in U.S. emissions of mercury. Finally, there is no accepted estimate of how mercury levels for fish caught in U.S. waters would respond to reductions in power plants' mercury emissions. Mercury in U.S. waters comes from natural sources like the earth's crust, foreign sources, and previously contaminated sediment, and is largely determined by a poorly understood process that converts inorganic mercury into the organic form that accumulates in fish tissue. Thus, Congress should mandate only a modest mercury cap until there is better evidence that deep cuts, like the 90-percent reduction proposed by Jeffords, would bring about meaningful environmental or public health gains.

### PERMIT TRADING

Good legislation would include a program patterned on the much-acclaimed SO<sub>2</sub> emissions trading program established by the Clean Air Act Amendments of 1990. The permit-trading program that EPA administers under Title IV of the act has become a model because it yielded emissions control costs and emissions that were both lower than expected. However, lawmakers should be careful to adopt a trading program that builds on the lessons of the earlier SO<sub>2</sub> program, and is not merely a cookie-cutter copy.

For instance, an emissions trading program should recognize regional differences in the damages from emissions to help ensure that trading does not worsen environmental protection. Congress should direct EPA to take into account the broad regional differences in emissions' damages when designing emissions permit markets. For example, a permit to emit 12 tons in the sparsely populated West, if traded to a power plant in the densely populated East, might allow emissions of only 10 tons because emissions in the East are more damaging. The Bush proposal to create two separate regional markets for NO<sub>x</sub> emissions is an inadequate step in that direction because it bans any trade between the two regions.

Second, an economically sensible trading program would allow tradeoffs between pollutants with similar effects. All legislative proposals to date specify maximum levels of emissions

for NO<sub>x</sub> and SO<sub>2</sub>, as if air pollution legislation were a cake recipe. Yet, changing the relative stringency of NO<sub>x</sub> and SO<sub>2</sub> caps need not affect air quality, because the two pollutants have very similar effects, and the Clean Air Act already compels states to limit emissions to meet air quality standards. A better policy would be to authorize EPA to give permits to emit NO<sub>x</sub> in exchange for permits to emit SO<sub>2</sub>, and vice versa. Firms would willingly conduct such trades whenever the emissions permits they receive are more valuable. Environmentalists and EPA should also welcome such trades as long as the exchange rate is set so that expected environmental damages do not rise. Congress, therefore, should allow the

mix of NO<sub>x</sub> and SO<sub>2</sub> to vary with market conditions and avoid prescribing specific national limits for the two similar pollutants.

Finally, Congress should authorize firms to trade permits to emit mercury. A national market for mercury emissions permits makes sense because significant local public health risks are not linked to mercury emissions from specific sources. Congress should also authorize EPA to sell mercury emissions permits at a prescribed price — such as \$20,000 per pound — to reduce the risk of unduly high mercury control costs.

### ENDING NSR AND OTHER REDUNDANCIES

New Source Review would no longer have any rationale in facilities covered by the new emissions caps. Congress should

exempt such facilities from the byzantine rules of the program, as defined by 704 pages in the *Code of Federal Regulations* and 513 separate EPA policy and guidance documents. Moreover, the complexity of the program demands legislative action, not reversible administrative reforms. Lawmakers also should exempt other emission sources, like pulp and paper mills, from NSR requirements if they volunteer to be covered by the emissions cap.

The cap and permit-trading system would also make unnecessary the regulation that EPA currently is drafting to limit mercury emissions from power plants. That regulation is likely to be relatively burdensome because of the approach prescribed by the Clean Air Act. New legislation should direct EPA not to pursue new mercury regulations.

The government can rationalize air pollution regulations by enacting new caps on power plant emissions. Economics are important in setting the stringency of the emissions caps, designing permit trading systems, and eliminating redundant regulations. Congress should pay more attention to basic economics to ensure that the new legislation makes sense. **R**

