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# How Not to Create a Job

Paul R. Portney

**O**NE OF THE PRACTICES that economists decry is the use of a single policy to accomplish several different objectives. Like most admonitions, however, this one is more often ignored than heeded when policy is made. Programs ostensibly intended to improve education, transportation, housing, health, or energy security are often designed to serve other goals as well. Of these supposedly "incidental" goals, the creation or preservation of jobs is by far the most important.

Regulatory policy is no exception to this rule. For instance, what has been called the largest public works project in U.S. history, the building of sewage treatment plants all across the country in the 1970s, was only possible because the Clean Water Act mandated a 75 percent federal subsidy of construction costs. Similarly, Section 125 of the Clean Air Act enables the Environmental Protection Agency (EPA) to modify air pollution requirements that conflict with regional employment goals. Much more interesting and subtle, however, is Section 111 of the Clean Air Act, affecting all newly built coal-fired electric power plants. While jobs are never mentioned in this provision, they are at its heart. Simple analysis shows how poorly employment policy is served by this particular

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piece of tinkering with federal environmental regulation. But, first, some background.

## Background

The 1970 amendments to the Clean Air Act created dual federal-state responsibility for air pollution control in the United States. The federal government, acting through EPA, was to establish maximum permissible concentrations for a half-dozen common air pollutants, setting them at levels that protected public health and welfare. EPA was also to establish so-called new-source performance standards for all *new* or substantially modified plants in a number of major industrial categories. These standards set specific and uniform limits on pollutant discharges that are unrelated to air quality in the area where the plants are to be built.

The states, for their part, were to devise plans for controlling *existing* polluters. These plans—in conjunction with the federal new-source standards—would bring the states into compliance with the national ambient air quality standards according to a schedule included in the law.

In 1971 EPA issued its new-source standard for coal-fired electric power plants, specifying that they could emit no more than 1.2 pounds

of sulfur dioxide per million BTUs of energy generated. This particular number was chosen to ensure that power plants built in the eastern United States could burn locally mined coal, which has a high sulfur content, and still meet the standard by installing scrubbers to remove the sulfur as it rose through a smokestack.

As best-laid plans are wont to do, this one went astray. Eastern utilities found that their new plants could meet the standard more cheaply by hauling in low-sulfur coal mined in the West and dispensing with the scrubbing process. Existing power plants, whose emissions were limited by a ceiling under state implementation plans, discovered the same thing, and they too began substituting "clean" coal (or fuel oil) for "dirty" coal and scrubbers. This did not escape the notice of the United Mine Workers, whose membership is concentrated in the East, or the members of Congress that represented Ohio, West Virginia, and other eastern coal states. These groups eventually came together with environmentalists—who were eager to see all coal scrubbed—in a powerful lobby for changing the rules.

Their efforts began to pay off in 1977. In amending the Clean Air Act, Congress specified that the emissions limits on new facilities were to be achieved through "technological" means and that the percentage reductions were to be "continuous." Translated, that told EPA to stop allowing new power plants to meet air quality goals through fuel substitution and start requiring scrubbers and other control equipment—a clear victory for the "dirty coal coalition." In 1979 EPA's implementing regulations made the message explicit: henceforth *all* coal burned in new power plants was to be scrubbed, although plants burning clean coal would be permitted to remove a somewhat smaller percentage of sulfur than plants burning dirty coal. The 1971 standard of 1.2 lbs/million BTUs was retained.

### The Cost of Technology

It is important to recognize that regulatory jury-rigging protects jobs only at a cost. Scrubbers are very expensive: a new 1000-megawatt power plant might cost \$1 billion, \$200 million of which would be spent on scrubbers. Generally, the same reduction in emissions could

be had much more cheaply by burning low-sulfur coal and taking various other steps. Just how much more cheaply is part of the subject of an April 1982 report by the Congressional Budget Office (*The Clean Air Act, the Electric Utilities, and the Coal Market*). The report makes it possible to calculate what the nation will eventually be paying in higher electricity bills to preserve coal miners' jobs.

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The CBO report compares the new-source performance standard now in effect, the original 1971 standard, and several alternatives on the basis of their effects on sulfur emissions, pollution control costs (and hence electricity prices), and the markets for low- and high-sulfur coal. One of the alternatives is of special interest. It would allow a new coal-burning power plant constructed in any state east of the Mississippi River to get by without installing scrubbers if it could persuade some other sulfur polluter in the state to reduce its emissions by at least as much as the excess (above the present standard) at the new plant. In other words, this option would broaden considerably the use that new sources can make of EPA's "offset" policy (see Bruce Yandle, "The Emerging Market in Air Pollution Rights," *Regulation*, July/August 1978).

This is no pie-in-the-sky scheme: a proposal of this type from an Illinois utility is pending before EPA right now. Moreover, its economic advantages would not be trivial. According to CBO figures, it would produce the same improvement in air quality as the current new-source standards, at *annual* savings of about \$3.4 billion by the year 2000. The savings would be even greater if interstate trading of emissions were permitted.

### How Much Is a Job Worth?

In addition to making that useful cost comparison, the CBO report examines the effects of the two options on regional coal markets. As might be expected, the new-source offset approach

would result in somewhat greater coal production in the West by the year 2000, and slightly lower production in the East and Midwest. (Eastern utilities currently have little reason to buy low-sulfur coal since they have to scrub it when they burn it anyway.) CBO's estimates of the distribution of these changes are shown in the first three columns of the table.

Using data on the productivity of coal miners by region (weighted to reflect the relative contribution of surface and underground production), it is possible to translate predicted changes in coal production into likely job losses and gains. The fourth column gives the results. By the year 2000, job losses would number 10,603 and gains 6,048—for a net loss of 4,555—if a new-source offset approach were substituted for the current new-source performance standard.

One more simple calculation makes clear the high cost of protecting jobs by air quality regulation. Taking CBO's estimate that the current new-source standard will cost electricity users an additional \$3.4 billion annually in current dollars by the year 2000 compared with the option discussed above, and dividing that figure by the number of jobs lost (10,603), we find that each of the jobs protected carries a price tag of \$320,000 a year—more than twelve times

what a miner could expect to earn! And this assumes that none of the miners who loses a job in one area will fill a job created in the others. But if, for instance, the mining jobs created in Central Appalachia are filled by some of those who lost their jobs in Northern Appalachia, the cost-per-job saved soars still higher. If we count only the net job losses that would result from adopting a new-source offset policy, each job protected by the present standard would cost the nation nearly \$740,000 a year in twenty years.

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It is tempting at this point to settle for the obvious. Yes, it would surely be cheaper to buy each coal miner a comfortable home in Florida and pension him or her off at \$50,000 a year. We could do all that and still save electricity users in the eastern United States several billion dollars a year. Indeed, there is recent precedent for using compensation, albeit a less extravagant variety, to help workers who are displaced as a result of government policy changes—for example, in the case of airline deregulation. Despite the flaws pointed out by Robert Goldfarb and others (see *Regulation*, September/October 1980), compensation is probably preferable to maintaining a horrendously expensive protective barrier like the current new-source performance standards.

But such an approach ignores the important fact that coal miners, like most of us, want productive work, not a federal "buy-out." Fortunately, there is a better and much less expensive way of accomplishing this goal. Michigan's Downriver Community Conference Economic Readjustment Program has successfully retrained and relocated unemployed manufacturing workers for less than \$2,000 each, while the Trade Adjustment Assistance and CETA programs have done the same for \$2,000 to \$3,000. Since the tab for these programs, per worker, is more than a hundred times lower than that of even one year's job protection

REGIONAL COAL PRODUCTION AND  
CHANGES IN EMPLOYMENT  
BY THE YEAR 2000

Region	Millions of Tons a Year			Job Change
	Current stand-ards	New source offset	Differ-ence	
Northern				
Appalachia	331	314	-17	-5,862
Central				
Appalachia	342	354	+12	4,659
Southern				
Appalachia	21	20	-1	-279
Midwest	252	239	-13	-3,144
Central West	17	16	-1	-244
Gulf	119	112	-7	-456
E. Northern				
Great Plains	44	45	+1	46
W. Northern				
Great Plains	383	402	+19	844
Rocky Mountains	183	180	-3	-618
Southwest	142	148	+6	499
Northwest and				
Alaska	33	33	0	0
TOTAL	1,867	1,863	-4	-4,555

**Source:** Congressional Budget Office, *The Clean Air Act, the Electric Utilities, and the Coal Market*, April 1982, pp. 70-71 (tons of coal); and author's estimates (job losses).

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through the current new-source standards, some accommodation ought to be possible. It might take the form of permitting new plants to offset some of their emissions, coupled with an aggressive program of job assistance and

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perhaps even salary supplementation in the areas likely to be adversely affected. Since new mining jobs would be opening up in areas near those where other mines would close, it might in fact be possible to relocate miners in new jobs at an even lower cost than in the programs cited above.

### **Conclusion**

In 1983, when Congress once again considers Clean Air Act reform, it will no doubt linger over the effects of air pollution control on jobs. One would hope that the discussion will be more enlightened than in years past. Although the jobs of coal miners—indeed, all workers—are important, we need not spend \$320,000 to \$740,000 a year to guarantee them, particularly when suitable, far more cost-effective alternatives are at hand.

In next year's debate, some will be sure to claim that a new-source offset program would harm the environment. The harm would occur, they will argue, when the existing plants that provided the offsets for the new plants are retired, leaving new plants that are dirtier than they would have been had the current standards been kept. But this point would not be reached for twenty or thirty more years. There is ample time between now and then to develop new and still less expensive means of sulfur removal. One such technology, fluidized bed combustion, may already be near at hand and others are sure to be developed. In the meantime, using cleaner coal and fuel oil is not only the most efficient way for us to control sulfur emissions; it is also—fittingly enough—the most “natural” way as well. ■

### **The High Cost of “Local Content”**

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costing \$196,000 per job a year to U.S. consumers, of which \$44,000 would be inefficiency losses.

The jobs would cost at least five times as much as they would be worth to their holders. In 1981 auto workers earned an average \$25,000, compared to \$16,500 for manufacturing workers generally. With fringes, the total came to around \$40,000 per year. The supply industries where most of the jobs would be created have lower wage rates.

Perhaps the most telling argument of all is that many of these new jobs will take years to arrive. The changes would be phased in, and the eventual permanent rules would not come into effect until model year 1986, three years from now. Furthermore, the bill penalizes but does not prevent noncompliance with the local content targets. In the year following a violation, for instance, an offending firm would be permitted to sell only a certain share of what it had sold in the previous year, under a complex sliding scale of percentage cutbacks that would vary with the degree to which it had fallen short of the content quota. Under this rule, some big Japanese exporters would not be forced all the way down to the 100,000 level until around the end of the decade, assuming they decided to avoid American content and accept lower sales.

Such transition periods are obviously necessary if foreign producers are to be persuaded to relocate their plants here, since they cannot build plants overnight. In the meantime, however, auto workers are unlikely to wait around for the new jobs; most will have found employment elsewhere long before then. CBO's analysis of the original version of the legislation indicated that less than half the new jobs would be in place by 1985, and many would not show up until 1990—not in time to be of much good to an auto worker out of work in 1982 and 1983.

Clearly we would be better off paying these workers a handsome wage to stay home—or, better yet, to find jobs in other industries, so that their efforts could go toward work more useful than that of switching the national origin of otherwise identical cars. One thing is certain: at these prices, Washington could not afford to save even half the jobs in the labor market. It would run out of gross national product first.

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