Canada-United States Law Journal

Volume 5 | Issue

Article 18

January 1982

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Having heard presentations which focused on specific sections of the Clean Air Act, you probably have a better understanding as to its complex nature. Nevertheless, I am going to review the entire Act briefly.

The Act is complex, and I think some complexity is needed. Yet underlying that complexity is a very simple structure. Basically, the Act divides authority between the Federal Government and state and local governments.

The Federal Government authority is limited primarily to three areas. First, the EPA is responsible for setting standards which determine how clean the air should be to ensure healthy and productive lives in the United States. The EPA sets these standards through our extensive research.

The second function of the EPA under the Clean Air Act is to set emission standards for new sources. The Federal Government sets uniform standards so that states do not set up competitive bidding procedures to encourage industrial development.

There are some variations on that pattern. In certain instances, when dealing with hazardous pollutants, the EPA becomes involved in direct standard setting for existing sources. The primary goal of the Act, however, in terms of giving authority to the Environmental Protection Agency, is directed toward the control of new sources.

The final area of authority given to the Environmental Protection Agency under the Clean Air Act is that of overseeing state and local governments. The EPA supervises the plans that state and local governments put together to attain the goals which set as the EPA's original function. To some extent this role as interstate coordinator involves settling transboundary disputes as if they were international conflicts. That function, however, is within the Agency's jurisdiction.

After the EPA has set the goals and determined future emissions standards, then the states must create and execute an adequate plan to bring their air quality to a level that attains the goal set by the Environmental Protection Agency.

I consider this to be a very simple procedure and a sound structure, and I don't foresee any changes in the overall approach during the upcoming Clean Air Act revisions. Is that structure, however, adequate to address the acid rain issue? There is considerable disagreement over

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whether the existing Act is appropriately structured to deal with that problem. We heard Mr. Wooley, I believe, state that the EPA is not using its existing authority to deal with the problem. Of course, the Agency would be criticized by some if it used that existing authority, while others believe the EPA needs new authority.

So I will review our existing authority case by case. There is no greater authority on the Clean Air Act than Senator Muskie, or former Senator Muskie, who is aligned with those who believe that the EPA does have adequate authority under the existing Clean Air Act to deal with the problem of acid rain. Any of you who are interested in reading about Senator Muskie's stand on that issue can obtain a copy of a letter which he sent the Agency some time ago detailing those actions of the Act that he felt the EPA should stress to deal more effectively with the acid rain problem.

There are two promising areas of authority which ought to be developed. One is Section 115, which appears to be a very broadly structured law dealing with the issue of transboundary pollution, especially as a concept in which the pollution is emitted in one form, transformed to another, and deposited across international boundaries.

The other section of the Act which is often stressed, particularly by the environmental community, is a section of the Act which I will refer to as 111(D). The heart of that section of the Act gives the EPA the authority to set emissions limits for existing plants. As I indicated earlier, the EPA's central objective is to set emission standards for new sources of pollution, provision in the Act while another allows the EPA to set emissions limits for existing sources.

However, there is one catch. There is an emissions limit for existing sources of what are called non-criteria pollutants. The criteria pollutants are those with which you and I are the most familiar: carbon monoxide, sulfur oxides, particulates, ozone, and nitrogen oxides. These pollutants are relatively ubiquitous in the environment and are the ones at which the major state and Federal programs are aimed. One provision of the Act gave the EPA the authority to address non-criteria pollutants. Well, one of the interesting things about acid rain is that the acidity is caused by criteria pollutants—SO_2 and NO_2. Acid deposition (i.e., sulfates, nitrates and other acidic compounds) are not criteria pollutants. So, the real legal issue has become whether one can use a section of the Act which is aimed at controlling non-criteria pollutants, such as sulfates and nitrates, to control the emissions of criteria pollutants.

I believe that to stretch the law to that extent and use Section 111(D) probably would embroil the EPA in such serious legal challenges as to make section 111(D) a relatively useless section of the Act for addressing the acid rain problem.

There are other sections of the Act which have the potential to deal with the acid rain problem. Two are receiving a lot of attention today: Section 110(A)(2)(E), and Section 126. These sections are aimed at the

control of interstate air pollution. I understand that there will be further discussion of these sections later. The EPA has not yet acted on either Section 110(A)(2)(E) or Section 126, but I would like to announce here that the EPA will be holding a national hearing on that issue in May, in Washington.

Now, I'd like to direct my comments to Section 126. That Section does not offer a very fruitful acid rain strategy. Let's take an example. If Pennsylvania sues Ohio because of SO_2 coming across the border and claims that the SO_2 from Ohio is creating non-attainment in Pennsylvania, Pennsylvania would then have to control its emissions of SO_2 beyond the levels otherwise required. It is this resulting situation which is relevant to the acid rain problem.

My feeling is that if Section 126 is used to reduce SO_2 in Ohio, that will do nothing more than allow Pennsylvania to raise its SO_2 emissions. There are clearly equity reasons for pursuing that policy. But in the end, this approach will not have reduced total loadings of SO_2 in this country and therefore may not have done much for acid deposition. So, to me Section 126 is an equity issue. Although it's an interstate equity issue, I don't think that it is necessarily the solution to acid rain in this country.

Another section of the Act which is often cited in regard to acid deposition is the EPA's stack height policy. Again I would say that the stack height policy that the EPA has in place at this time is probably adequate to deal with the issue of acid deposition. There is considerable debate with regard to the extent to which stack heights contribute significantly to the downwind formation of acid. The stack height policy which the EPA is formulating at the present time is probably adequate, and minor variations from it will not really have much impact on the total amount of SO_2 and NO_2 which is being emitted into the air in this country.

Another approach that the EPA might pursue is to set an ambient standard for sulfates. In that case, would be doing nothing more than stretching out the existing structure of the Act. If the EPA sets an ambient standard for sulfate, how are sulfate levels measured? How is that measurement relevant to the acid rain issue? Should it be measured in the atmosphere or on the ground? Should it be measured in the Adirondacks or only in the cities where people breathe it?

My feeling on ambient standards for acid rain control is that there are many better and more direct ways to deal with the issue and that the EPA would be wasting substantial public resources by attempting to control acid rain through an ambient standard. There may be good reason for regulating sulfates and nitrates because you and I breathe fine particles deep into our lungs, but let's do it for that reason. Let's not do it for acid rain control.

There are others who are encouraging the EPA to establish policies which encourage early retirement of existing sources. That is a policy which is very cost ineffective. To replace existing dirty sources with new sources, when it's less expensive to retrofit existing sources, is bad public

policy. If the EPA is to control acid rain in this country, existing sources of the problem should be controlled. The nation should not phase out relatively productive sources and replace them with new, expensive sources, when there are less expensive, yet effective, alternatives.

Others have suggested the control of mobile sources. Of course, the major contributor to acid deposition in the mobile source area is nitrogen oxides. Fortunately for the environment, in the 1970's, Congress recognized that NO_2 or NOx from cars was contributing to a number of environmental problems. At that time, Congress was primarily focusing on the impact of nitrogen oxides or ozone formation.

Currently, NOx emissions from cars are controlled by 75 percent. However, NOx emissions from power plants are not controlled at all. I would suggest that once again bad public policy is overburdening one sector of the economy where good controls already are in place, and where additional controls ranging from 75 to perhaps 90 percent is very cost ineffective. Additional NOx control of stationary sources can be achieved for substantially lower dollar per ton costs.

The last area where many have indicated that the EPA should address acid deposition is through the use and the increased stringency of modeling parameters. I would suggest that actions in that area represent an appropriate use of authority, although I am not convinced that the increased stringency of modeling parameters would necessarily have much impact on total SO_2 and NO_2 loadings. Frankly, in this country there are few non-attainment areas for SO_2 and NO_2.

To the extent that computer models reflect reality they require more stringent modeling parameters, a policy which I suggest the Agency should pursue. However, SO_2 emissions in this country would drop by no more than a 15 percent drop, if the EPA applied those parameters to all stationary sources in the country.

So, let me describe the problems with each section of the Act as it currently exists. Except for Section 115, which I think could be useful and certainly has to be explored, Section 111(D), which is the authority to go after existing sources, is subject to serious legal challenge. The interstate air pollution section of the Act probably would not result in any substantial reduction in overall SO_2 or NOx emissions. I feel that the stack height policy is already adequate.

With regard to the early retirement of facilities, the timing is wrong. Early retirement means retiring major utilities at some point in the 1990's, rather than letting them continue to 2010. I think we should be moving forward with some preventive medicine in the acid rain area which would result in action today, not action in the 1990's.

Mobile source NOx standards, already are fairly tight. With a massive effort the emissions reductions resulting from more stringent modeling parameters would be relatively modest.

Consequently, the EPA's current authority is neither adequate nor well-structured to deal with the acid rain issue. And I think for the most

part that even those people who argue that the EPA has the present authority to deal with the problem recognize that the EPA could have more effective authority.

So what are we doing at the Environmental Protection Agency to think about better structuring authority in this area? Well, we are not at this point writing any legislative language, but we are walking through the economic, social and environmental consequences of various types of regulatory authority which could be used to get at the problem of acid deposition.

Basically, there are four approaches at which we are directing our attention. Again, recognizing that utilities emit approximately two-thirds of the SO_2 and approximately one-third of all of the NOx in this country, we are focusing our attention on regulatory authority that would address the emissions problem of the utility sector.

The four basic approaches would include first placing an emissions cap on the industry. We are looking at caps which are on the order of four pounds per million BTU's or two pounds per million BTU's. Also, we are looking at technology standards. One possibility might be to wash all coal. Another alternative would be to implement a new technology, such as the limestone injection technology which is presently being developed in Germany and here in the United States. A third approach would be to allow an areawide bubble. It was permitted over the Ohio River Basin and could be handled with guidance from the Environmental Protection Agency or some other body that sets the emissions reduction in a region by either a percentage or total tonnage.

The last type of regulatory authority we are looking at is the use of fees, perhaps charging ten cents per pound of SO_2 or fifteen cents per pound of SO_2. What type of revenues would be generated? What kinds of signals would that send, and how would the utilities respond to those kinds of economic signals, as opposed to regulatory signals?

A number of factors have to be considered when we look at various types of regulatory authority. What are the impacts on consumer utility rates? What happens to coal production in Ohio or West Virginia? I believe we have approximately 31 different coal supplying regions in this country, each to be accounted for. What happens to our consumption of oil? What happens to our consumption of natural gas? What happens to emissions? How many scrubbers should be put on? The list of questions is endless.

So, we are trying to lay the foundation for the analysis which Congress will need to debate the issue of various types of regulatory authority that might be granted, should there be a determination that the Environmental Protection Agency should be given regulatory authority. As imput into that debate, we must first examine the impacts of various approaches to regulations and resulting levels of stringency.

Thank you.