I hope I am not the controversial one. Being out of the White House is a great relief, I can assure you.

I want briefly to describe emissions trading under the Clean Air Act\(^1\) and how successful it has been and should become. First, however, I want to emphasize the private sector as a source of solutions. The panel that appeared yesterday had ethics as one of its themes. Obviously, I worry about ethics, since I was the person in charge of it in the White House. Using the private sector is one of the surest ways to clean up some of the ethical problems involved with campaign contributions, lobbying, and back door deals that now trouble us throughout the Federal Government, and perhaps state governments, too.

I want to make the point now, at the outset, that if there is anything to be gained as a matter of public policy from using the private sector, it is a reduction of the ethical difficulties associated with having government try to micromanage so much of our lives. In today's world, this micromanagement results in all kinds of horrible difficulties for people who serve in government. One might hope that if we discourage enough people from serving in government, it would atrophy. Unfortunately, it does not work that way. It just reduces the quality of the people who are in it—not being the most highly qualified—have nowhere else to go. Therefore, in the long run it is important not to discourage good people from serving.

Now, emissions trading does not substitute for the body politic making a decision in some political process about what the level of pollution control, level of reduction, or level of cleanliness ought to be. I do not know that the market at this stage is sophisticated enough to provide that answer.

But once the performance standard is set and an emissions trading system is established, this allows abandonment of rigid permits and specified control technologies, and provides a highly efficient way of achieving the end result. I would hasten to add that it is quite possible that, if emissions trading under the Clean Air Act and elsewhere

continues to develop as it is now developing, it will certainly help in setting the goals because it will put a far better price tag on the cost of control. Moreover, in the area of air pollution, for example, pollution is often the result of incomplete combustion, which is, in a sense, inefficient use of resources. Permit trading encourages the development of least-cost controls, which sometimes may be achieved by increasing the efficiency of resource use. In this manner, permit trading may tighten the efficiency of the overall manufacturing and driving scene that we live in.

I want to emphasize again that letting the market allocate reductions tends to take the political gaming out of the process and, therefore, reduces incentives for firms or geographic regions to try to adopt regulation as a way of enhancing their own product. For example, natural gas producers now are all nibbling around the edges of global warming regulation. They perceive that they would benefit from regulation because they produce less global warming than coal, their competitor in the utility industry. This always happens in regulation. For every regulation that an environmentalist wants, there is always some profit-making interest that would benefit from the regulation that is devised. Yet if the marketplace is allocating reductions, it is not so clear who exactly is going to benefit. Therefore, the private incentives to impose regulations on competitors are significantly reduced.

The acid rain trading emissions program\(^2\) is not unprecedented. We used permit trading with the phasedown of lead in gasoline,\(^3\) and it made lead reduction rather painless. Conservatives might see this as a reason to abandon emissions trading, but I do not agree. I think getting lead out of gasoline was a very positive thing and we had to do it.

To note some other examples, offsets have been used in California for a long, long time. And the Montreal Protocol\(^4\) was based in part on allowing a trading system. The CFC reductions in this country through a modified auction made the phaseout dramatically faster than it otherwise would have been. People still may argue: “Did you have to phase out CFC’s?” I will leave that as a separate question. But once the decision had been made to do it, the use of market incentives made the process very much less painful than a command-and-control system would have otherwise done.

In acid rain control, the emissions trading system so far has produced rather dramatic results. Costs are lower than expected—the

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2. Id. §§ 7651-7651o.
emissions trades are taking place at about $160 a ton\(^5\) when it was anticipated that they would be over $750 a ton.\(^6\) And the number of tons reduced in the first phase has been much more than was anticipated. So you have a program coming in at about a quarter or a fifth of the anticipated cost with an acceleration of anticipated benefit in terms of emissions reductions.

People can still argue about whether there is any benefit at all from reducing acid rain. I am not going to get into that debate. That was a political decision made quite some time ago. But the costs have been kept under control. There has been no pattern of rate increases throughout the country, except recently in Indiana where there are what we call "political scrubs." That is, utilities have decided to put on scrubbers in order to effect a transfer payment from their ratepayers to the coal miners in their state. If this happens at the local or state level, if Indiana wants to do this, I am not sure that it really should be of great concern to the Federal Government. What the Federal Government wants to ensure is that Congress does not mandate such transfer payments across the country. But by and large, political scrubs have not been the norm of the day, and we are dealing with a much, much cheaper program than had been anticipated.

Does permit trading have an extension to other areas under the Clean Air Act? Of course it does. The granddaddy of all control programs is ozone nonattainment.\(^7\) It is by far the most expensive of any regulatory program now in place. God knows what the health care proposal is going to be from the Clinton administration, but barring that, it is clear that the ozone problem is the most expensive.

Here, what I call environmental arbitrage is at its greatest. There is a tremendous disconnect between the costs of reducing emissions from different possible targets of ozone control. There is a wide gap in control costs between stationary and mobile sources, between NO\(_x\) and VOC's, and between automobiles and gasoline. Control costs for methods targeting gasoline range around $2000 a ton,\(^8\) whereas for the car that the gasoline goes into, control costs may be $20,000 a ton. Those kinds of differences are made for traders to come in and even things out and produce an enormous savings. This is what emissions

\(^7\) 42 U.S.C. §§ 7511-7511f.
trading is all about. Where can you get the lowest cost per ton of reduction?

Emissions trading for ozone control is proceeding apace in the states, although there are some hangups in terms of developing regulatory regimes that will permit this. The programs are not complete, but in the Great Lakes region and in New England, the regional authorities and some of the states, such as Massachusetts, New Jersey, Michigan, and Illinois, show great promise. I think before the end of 1994, before the State Implementation Plans are finally due, we will have an active market in both VOC's and NOx, which will dramatically reduce the cost of the ozone program.

Beyond that, of course, there is the question of global warming. Here, Dick Stewart and I helped introduce concepts of what we call the comprehensive approach, allowing trading between countries and between alleged global warming pollutants. Once we got that idea established in our domestic agencies and they, in turn, got it fairly well-accepted (at least during the Bush administration) among our foreign trading partners, the pressure to do something immediately began to evaporate; it had become apparent that with a fully tradable system, one geographic region, such as Europe, could not get a quick advantage over another, such as the United States. This is because the United States producers would be able to purchase very low-cost reductions from less developed countries, and Europe's planned carbon dioxide reductions—to be achieved by using Russian natural gas to displace coal—would have to be offset by the very significant methane leakage from the gas pipeline system. If we adhere to a fully tradable system, I think we can postpone any action on global warming until the science has really come in and told us whether we need to do anything or not—I happen to think we do not. But process can have an impact on the substantive result.

Again, in closing, apart from the environmental benefits of permit trading, the ethical benefits are enormous. People used to parade through my office for years. First the oil companies would complain about stage two vapor controls on the gas pumps, then the car companies would complain about the on-board controls to catch the vapors; each would argue that the other cost less. There is no point in having political officials make those cost determinations. It is impossible. My eyes would glaze over and I would say: "Please get out of my office. Get out of my office." One very enterprising fellow at General Motors said in an exasperated moment: "Why don't we just go out and buy all the gas stations and put in the stage-two controls ourselves—that would be cheaper than putting them on the cars." He was probably right. In the future, maybe that is the way it will go.

Thank you.