C. Boyden Gray Address at the National Press Club
Wednesday, May 8, 2002

The events of 9/11 and the current turmoil in the Middle East have underscored the desirability of diversifying away from crude oil, the reserves for which are located primarily in that part of the world. At the same time, conventional wisdom often posits that promoting alternative sources of energy other than renewables, such as coal, nuclear or natural gas, inevitably requires compromising on environmental quality at a time that the demand for better air and water quality are intensifying. It is the thesis of this talk that conventional wisdom has it all wrong -- that in fact the steps needed to go the "last mile" of air quality are virtually the same as the steps to diversify cleanly from crude oil, and that recent policy at EPA has been pointing in the wrong direction.

In making this point I will rely on a couple of premises. The first is that simply reducing U.S. dependence on Middle Eastern crude will not prove much, because oil is a fungible commodity, for which Saudi Arabia will be the swing producer as long as the world is dependent on petroleum.

The second is that the United States has long had an energy policy, which is the Clean Air Act -- for the principal reason that air pollution is mainly the product of the use of energy. Examining the CAA carefully for its relevance to crude oil will not, of course, begin to exhaust -- no pun intended -- the public policy possibilities for diversification, for tax and trade policy can have much more influence. But it is impossible to begin to understand the position of crude oil without first looking at the CAA.

The main point I want to emphasize in this regard is that crude oil and gasoline have for historical reasons largely escaped the regulation that they would face on a level playing field and

for that reason have the most entrenched position of all of the pollutants covered by U.S. law. Of course, regulatory statutes routinely confer preferred regulatory status on incumbents. But in this case the grandfathering is quite dangerous since, if we were now driving electrical cars and someone just recently discovered the internal combustion engine, gasoline probably could not be introduced into commerce because of its high toxicity.

What makes unraveling this grandfather so especially difficult is the recent media drumbeat that it is the old power plants that have a grandfather exemption from the Clean Air Act. This is particularly pernicious because it both ignores the half-dozen or so regulatory regimes aimed at these plants and at the same time lets gasoline pollution, which is much more dangerous and more "grandfathered," largely off the hook. This is not to say that gasoline faces no regulation; it is rather to say that the playing field is far from level, and the resulting imbalance both endangers public health and national security.

How did we get here and how do we get out? Historically the problem begins with a command-and-control focus on controlling the rate of pollution out of the pipe where the pollution exits, which has never been satisfactorily replaced by performance standard that seek to reduce the actual tons in the air. For example, EPA initially allowed the power plants built in the Midwest to erect very tall smokestacks to send the pollution away from the plant and the surrounding neighborhood -- only to have it land in the Northeast and Canada. Similarly, EPA early looked only at the tailpipe of the car, paying little attention to the fuel that went into the gas tank. Not surprisingly, the fuel in both instances got dirtier and dirtier as the power plants and cars struggled to get cleaner and cleaner. Air quality improved -- but not nearly as rapidly or efficiently as could have been the case.

The l990 Clean Air Act Amendments sought to change the paradigm to emphasize public health outcomes, performance standards, level playing fields and market mechanisms in place of command-and-control litigation. The results were dramatic. With power plants emissions, for example, the incentive-driven Title IV acid rain program has produced, with virtually 100% compliance and no litigation, the largest pollution reduction results of any air quality initiative at less than a fifth of the anticipated costs and years ahead of schedule.

On the mobile source side, the l990 CAAA achieved modest regulation of gasoline for the first time, requiring in nonattainment areas the use of so-called reformulated gasoline that also has escaped the usual litigation cycle and produced a 40% drop in ozone violations the very first summer it was introduced into California. Both programs emphasized performance standards aimed at controlling the tons that the environment sees, leaving to industry the choice of which technology, which fuel, or which whatever to use to get there. There were some innovation surprises. There was exploitation of highly efficient gas turbines initially developed for military aircraft. There was significant penetration -- equivalent to five refineries -- of a nonpetroleum, pollution-reducing gasoline additive. There was a dramatic increase in the use of very clean Western coal. And the great success of Title IV confirmed that the three most ambitious and successful pollution reduction programs of all time -- the phase out of lead in gasoline, the elimination of CFCs and the 50% reduction in acid rain pollutants -- have all relied on performance standards and market incentives than command-and-control litigation.

The EPA's current refocus on litigation, combined with the Senate energy bill, however, will all but undo all of these reforms and put crude oil back in its preferred position by over regulating electricity. To its credit, the White House is trying to get the performance

standard/market incentive paradigm back on track -- but in my opinion it will not stand a chance in the current fog of misinformation.

One of the problems with the White House approach is that it only deals with stationary sources -- and only the utility portion of that. It totally ignores cars and gasoline, which is where the latest scientific research shows the biggest health threat likely to be. Indeed, if one carefully examines the most recent American Cancer Society study, it shows the utility pollution to be statistically insignificant for cancer over the last few years of dramatic reductions, thus underscoring the mobile source contribution to the fine particle problem.

More importantly, the latest monitoring seems to show that for fine particle pollution, now considered the most serious of the criteria pollutants, mobile sources are the principal contributors. More specifically, in the West mobile sources account for as much as 40%, with NOx coming in second and SO2 being largely irrelevant. In the East, mobile sources are again the principal source for the major population centers, with SO2 predominating in the more rural areas and NOx largely irrelevant.

Within the mobile source sector, the principal problem is the presence of aromatics, which are highly toxic, which account for virtually all the gasoline contribution of fine particles and which produce three times the fine particle pollution of diesels. Aromatics, of course, cause much more damage than just their role in PM 2.5. They are the principal actor in ozone because of their central role as the most reactive of the volatile organic compounds (called VOCs), and they are also considered dangerous air toxics, being either carcinogenic (benzene) or mutagenic (toluene and xylene).

The reformulated gasoline provisions of the 1990 amendments reduced them somewhat for the first time, accounting in part for the great success of the RFG program. But aromatics

still constitutes roughly 30% of the gasoline pool, and reducing them dramatically would provide lasting benefits because unlike car hardware, clean fuels do not deteriorate in use and over time.

Why, then, is EPA focused just on power plant SO2 and NOx, which do not appear to be the principal culprits? Indeed, as I just mentioned, SO2 is irrelevant in the West, and mobile sources account for more than twice the amount of NOx as power plants. And in the East, NOx is not only not a significant contributor to fine particles but its continued reduction in many urban areas without parallel reductions in VOCs will actually make ozone worse.

The best answer I can tell is that EPA's focus is a response to the campaign waged against the so-called grandfathered power plants by environmentalists and the Northeastern states, who were complaining about NOx being sent downwind by Midwestern power plants. By now, almost everybody seems to know about the creaky old grandfathered plants that have never had to control any of their emissions and that were supposed to have been shut down years ago.

The problem with this grandfather campaign is that whatever grandfather these old plants might have had in 1970 was terminated with a bang by the l990 Clean Air Act Amendments, which did four important things to these plants. First, they mandated a 50%, ten million ton SO2 Acid Rain reduction, which is now largely implemented. Second, they authorized downwind states to seek relief from transboundary pollution, which the Northeastern states did successfully with the so-called NOx SIP Call upheld in 200l. Third, they authorized EPA to promulgate regulations to clear up visibility problems caused in National Parks by power plants; EPA has now issued those regs and some states have already started implementing them. And fourth, they tightened the rules against ozone, which can also impact these old plants.

None of this means that the old power plants are finished with cleanup. We know more now than we did in l990 about the extent of the harm caused by fine particle pollution--the first

controls for which were implemented in l990, as just described, under the motivation to address acid rain. But we also know now that the biggest culprits are the mobile sources, not power plants, as I have outlined. So we come back to the question, why just look at power plants?

The Senate energy bill may provide one answer at one level. By now, most people--in Washington and the farm states anyway--are aware of what the Washington Post described Sunday as the "ethanol bonanza" Senator Daschle delivered to the Midwest in the energy bill. But most people are probably not aware that this ethanol bonanza will increase crude oil imports, increase pollution and increase prices. These negatives arise because to make way for ethanol, which is expensive despite its many subsidies, the Senate had to ban a cheaper and less air polluting competitor called MTBE--on charges of water contamination which cannot withstand serious scrutiny and which the House of Representatives had previously rejected. The banned product is the equivalent of what could be refined from ANWR, or the output of five refineries, or nearly the refined output of Iraq. But ethanol capacity cannot equal the output of the five refineries, certainly not now and not even when the bill is fully implemented years from now. Foreign crude oil imports will therefore have to make up the balance. Additionally, ethanol uses more crude oil in the blending process than MTBE because it causes gasoline to evaporate at a high rate.

This evaporation, in turn, causes more ozone and fine particle pollution and increases public exposure to cancer from the aromatics. For this unpleasantness the legislation grants ethanol a waiver. More astonishingly, despite the increased cancer risk posed by the bill, it also grants all gasoline containing any ethanol blanket immunity from any tort liability that might be sought by the trial lawyers. This is most unusual trial lawyer protection will raise many eyebrows among the rest of industry when the news gets around.

This judicial pardon follows a similar regulatory pardon granted to gasoline by EPA at the end of the Clinton Administration. Notwithstanding the three toxic, ozone and fine particle strikes against aromatics described above, the Clinton Administration decided in its last year that it would not ask the oil companies to do any--repeat any--aromatics reduction beyond that achieved by the l990 Amendments in order to spare the industry the imposition of any costs. This is the real Clean Air Act grandfather.

In issuing this pardon the Clinton EPA did not pause to explicate what if any costs would be incurred, nor did it hint at any benefits that it was giving up. But the backup documents acknowledge that additional benzene reduction costs are negligible. And the benefits are, as suggested above, nothing short of extraordinary. Aromatics are not the ordinary product of basic refining but are manufactured through additional processing in order to produce the octane necessary for today's cars. They do not, in other words, need to be produced because the octane can be provided at little additional cost by ethers and oxygenates like ethanol, its cousin ETBE and the much slandered MTBE.

Simply limiting aromatic production to 20% would all but solve the mobile source responsibility for ozone, fine particles (excluding diesel) and cancer risk, because at that level the so-called Tier II car controls set to be fully implemented in 2030 can virtually eliminate those pollutants from auto exhaust. Remember that aromatics account for three times as much fine particle pollution as diesels. So if the recently affirmed diesel sulfur rule will provide $70 billion in benefits, limiting aromatics to 20% will provide multiples of that, especially in view of the greater zone and cancer reduction. Of course, limiting aromatics to less than 20% now would provide even greater benefits as prior to the full 2030 Tier II car rule implementation. Such a move would, equally importantly, provide very significant reductions for off-road emission from

small sources like lawn-mowers which are growing rapidly and now account for more than 25% of mobile source pollution.

Since such a bountiful environmental harvest would also reduce crude oil use by at least l0% very quickly, it would seem an obvious thing to do. A 10% reduction in crude oil use is big enough to convert which is now a seller market into a buyers market. So if the costs are negligible, why have we not already implemented this national security and environmental windfall by terminating the gasoline grandfather?

First, terminating the gasoline grandfather would upset the cozy deal in the energy bill with ethanol, which cannot supply the needed volume of clean octane by itself, thus requiring use of competitive products. Second, this approach would undermine the campaign against the utilities and expose the conflict facing two of the most generous foundation supporters of the jihad against the power companies. That conflict arises from the fact that these foundations, the Rockefeller Family Fund and the Pew Charitable Trust, owe their funding to the oil industry and their current management to oil company heirs. These two families may not be consciously protecting their legacy, but that is the effect of ignoring the gasoline grandfather and pointing the finger at another industry.

The way out of this tangle is to create a level playing field by identifying the major components of fine particle pollution and then creating a market, including mobile-stationary source trading as requested by California, to sort out the cheapest and most effective reductions and to promote innovation in the mobile source sector. In part because of the gasoline pardon, mobile PM and ozone reductions are much less expensive than stationary source reductions, which suggests that a market could trigger the deployment of a significant number of electric cars. The White House should therefore abandon the clean skies initiative because it deals only

with power plants and instead construct a comprehensive mobile-stationary source market for all sources of fine particles as part of EPA's PM 2.5 implementation program.

Level playing field concept could be extended to taxes as well. It stunned me to learn recently that the tax expenditures received by the oil industry since l967 through depletion allowances and intangible drilling write-offs amounted to more than $150 billion, continuing today more than $2 billion a year. That tends to put the controversial $600 million ethanol subsidy in perspective, although directing some of the obscene farm bill subsidies to alternative fuels could reap huge crude diversification, clean air and trade benefits.

But one thing is for sure. To maximize both national security and air quality, it is essential first to get the grandfathers straight.