

Refueling the Clean Air Act

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U.S. House of Representatives

These days, clean fuels are like the Dallas Cowboys—you either love them or hate them. Fans, including our President, argue that clean fuels will finally reconcile the automobile with the environment. Others disparage them as ineffective and impossibly expensive. Few are indifferent.

I have a somewhat different perspective. We need to promote clean fuels. Indeed, we need to do more than the Administration proposes, better than it proposes. But we also must recognize that alternative fuels are no panacea. Certainly they can't replace strict pollution controls on gasoline vehicles.

In other words, we must lower our expectations for alternative fuels at the same time that we raise our efforts to use them. Realistically, we can expect that clean fuels will offer modest help to cities striving to stop smog. That's less than many would have us believe. But it's still ample reason to pursue alternative fuels aggressively.

Our urban areas face tremendous air pollution problems. Ozone or "smog" levels in more than 100 cities violate the federal health standards. This pollution shortens people's breath, induces coughing and nausea, and threatens to scar lungs permanently. Young children are especially vulnerable. Carbon monoxide pollution, which deprives the heart and brain of oxygen and threatens fetal development, exceeds the federal standard in over 40 cities. And toxic emissions pose cancer risks as high as 1 in 1,000 to average urban residents.

The main culprit in each instance is the same—the automobile. "Mobile sources" (principally cars and trucks) cause more than 70 percent of our carbon monoxide pollution, 50 percent of our ozone-forming hydrocarbon pollution, 45 percent of our nitrogen oxide pollution, and 50 percent of the cancer deaths due to toxic emissions. These sources also contribute significantly to global warming and ozone depletion.

Alternative fuels cannot stop automotive pollution singlehandedly—far from it. The leading legislative proposals—such as the Administration bill (H.R. 3030) or the bill that Congressman Jerry Lewis and I introduced along with over 140 co-sponsors (H.R. 2323)—would require alternative fuels in only nine cities, which is less than 10 percent of the nation's cities afflicted with smog problems. For most of the country, the answer isn't methanol, ethanol, or natural gas: it's tighter controls on gasoline—powered Ford Escorts, Lincoln Continentals, and Toyota Tercels. And the key measures won't be clean-fuel concepts like con-

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Rep. Henry Waxman (D-CA) is Chairman of the House Subcommittee on Health and the Environment, which has jurisdiction over the Clean Air Act. Waxman along with Rep. Jerry Lewis (R-CA) sponsored H.R. 2323, The Clean Air Restrictions Act of 1989.

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Choosing Alternative Fuels and Vehicles

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Progress in many environmental programs, particularly for criteria air pollutants, has slowed. The year-to-year improvements in environmental quality have become smaller over time, despite increased expenditures on pollution control.

This declining progress is particularly problematic for ground-level ozone control. Not only has the number of cities that fail to meet the ozone standard dramatically increased in the past few years, but a variety of studies are now challenging the adequacy of that standard to protect public health. Clearly, additional controls are necessary to reduce ozone pollution.

The Bush Administration's Clean Air Act bill proposes a number of measures to improve ozone levels, most of which deserve congressional support. A centerpiece of the Administration's bill is its program for alternative fuels and vehicles. Such a program can contribute to ozone reductions, if it is linked to many other measures such as tougher auto inspection and maintenance programs, faster turnover of the vehicle fleet, and air toxics controls for volatile organic compounds.

The Administration's goal is a sound one: to find fuels and vehicles that emit less ozone-forming chemicals than existing gasoline and cars. The President's plan calls for alternative fuels to be used in 500,000 new flexible fuel cars beginning in 1995; 750,000 new cars in 1996; and 1 million

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The Town of Tonawanda, NY, replaced its fleet of Water and Sewer Department vehicles with natural gas-powered trucks.

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version standards and dual-fuel capabilities: they'll be tighter tailpipe standards on gasoline vehicles, catalytic converters that last the full life of the vehicle (100,000 miles), and controls on evaporative and refueling gasoline emissions.

In fact, even in the heavily polluted cities that will benefit from alternative fuels, these fuels are far from a complete solution. The Administration bill calls for a million vehicles to be sold annually in nine cities. According to early estimates, this is only 30 percent of the new vehicle sales for these cities, which means that the vast majority of miles driven will continue to be high-polluting gasoline miles.

Nevertheless, the leading alternative fuels—methanol, ethanol, natural gas, propane, and, perhaps, reformulated gasoline—can help lower pollution levels. Each has its own special set of advantages, as well as some disadvantages. An optimized methanol vehicle will reduce ozone-forming emissions by up to 90 percent and essentially eliminate toxic benzene and particulate emissions. Yet the fuel may be expensive and poses some unique safety problems.

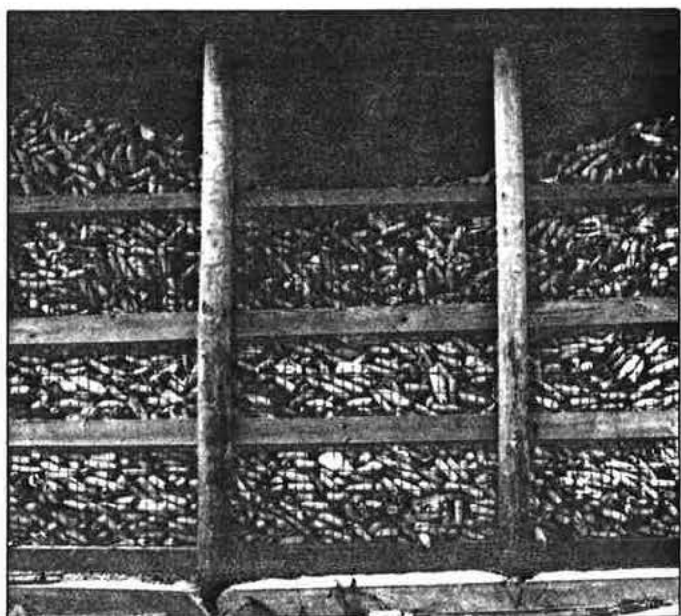
Natural gas, on the other hand, can reduce ozone-forming emissions by 90 percent, lower carbon monoxide emissions by 50 percent or more, completely eliminate toxic emissions, and poses few safety risks. On an energy-equivalent basis, it's cheaper than gasoline. Yet because it's a gaseous fuel, it requires expensive pressurized storage tanks and a new fuel-distribution system. The other alternative fuels—including the oxygenated fuels that fight carbon monoxide pollution—likewise have distinct advantages (and some disadvantages) over gasoline.

The hardest issue isn't whether alternative fuels will on balance help our pollution control efforts. Surely they will. Rather, it's picking the right fuel for the right vehicle at the right cost. And it is here that I have some of my strongest differences with the approach of the Administration.

The best approach, I believe, has two elements. First, it should set federal performance standards for the competing fuels and vehicles. These standards should protect the public from any unintended adverse effects of burning alternative fuels. For instance, the standards should at a minimum prevent methanol vehicles from emitting more formaldehyde than gasoline vehicles. The standards should also require that clean-fuel vehicles use the best available control technology to reduce emissions.

But beyond standard-setting, government should not interfere—or at least it should do so as little as possible. The goal should be to allow a free market to pick the winning and losing fuels, not to give this decision to federal agencies. In other words, the federal government should create a demand for clean fuels, but then let the market figure out the best and most cost-effective way to satisfy that demand.

H.R. 2323 takes this approach. As a first step, commencing in 1993, it requires fleet operators in heavily polluted areas to switch to clean fuels when they purchase new vehicles. This makes practical sense because fleet vehicles generally travel more miles than private vehicles and have access to special maintenance and refueling facilities. Equally



To meet 1988 U.S. gasoline demand with 100 percent ethanol fuel would require planting 570 million acres in corn.

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important, the fleet mandate generates an early, but manageable, market demand for clean fuels.

Five years later, by 1998, the bill markedly expands clean-fuel requirements. It requires the nine most polluted cities to set up systems of requirements and incentives to insure that 30 percent of the new vehicles purchased by private drivers operate on alternative fuels. (In Los Angeles, the nation's most polluted city, all new vehicles must run on alternative fuels after the year 2000 under H.R. 2323.) Again, the driving force should be the marketplace. The independent decisions of the affected cities and, most importantly, their consumers and car dealers, will create effective marketplaces for clean fuels and vehicles.

The supposedly "free-market" Administration bill, by contrast, directs EPA to mandate which alternative fuels will be sold and where. These decisions are to be based in large part on "motor vehicle manufacturers' projections of future sales of clean-fuel vehicles" (Section 201(b)). In other words, private car companies will dictate public policy based on private calculations of profit and loss.

This is an unwise formula, I fear. It is unreasonable to expect EPA to micro-manage the automobile market successfully. And it is poor judgment to give private corporations such leverage over key policy decisions. The car companies have economic interests for avoiding natural gas and propane vehicles. For instance, these vehicles will tend to turn over less rapidly than methanol vehicles because of their increased capital costs and relatively lower operating costs, thus reducing new sales. Such special interests should not determine national policy.

Many of our cities face all too daunting challenges in controlling pollution. Los Angeles must reduce its hydrocarbon emissions by 80 percent; Chicago by 70 percent; and several other cities by 60 percent. These areas need all the help they can get—including both strict controls on gasoline vehicles and aggressive programs promoting alternative fuels.

But we must supply this help in a way that recognizes that the market—not federal officials—can pick among the competing clean fuels most cost effectively. □