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Oil Price Backlash Propels New Ideas

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The backlash over high oil prices may directly affect the progress of alternatively fueled vehicles, or those that run on something other than petroleum. Researchers and policymakers are looking into long-term solutions to lessen the dependence on oil through the future development of hydrogen fuel cells, but advocates of natural gas-fueled vehicles say that they are already filling a role.

The objective is energy security and improved air quality. But the means by which that is accomplished can occur in different ways. Those in the business of promoting natural gas as a fuel source for cars, buses and trucks say that the hydrogen economy would be a win-win proposition—if it comes to fruition. In the event it does not, however, lawmakers and regulators alike ought to promote technologies that are viable today and can run on natural gas and propane.

Toward that end, the vehicle manufacturers must get behind the idea and produce products that are as good as those that use petroleum and the government must also endorse the idea through tax-favored legislation to promote the cars, the fuel source and the fueling infrastructure. Once the product gets legs, economies of scale would develop and the cost of vehicles and the technologies they comprise would come down.

The European Commission has enacted a transport policy that aims to replace 20 percent of the petroleum used in its transport sector by 2020—a result that would put 23 million natural gas vehicles in Western Europe by that time. Meanwhile, the U.S. government may be poised to enact legislation this year that would grant tax breaks for the purpose of

getting more such vehicles on the road. In this country, however, the government's long-term focus has been on facilitating the hydrogen economy and its short-term one on hybrid cars that run on both gas and electricity.

Proponents of natural gas-fueled vehicles say that diversification is the answer—not placing all bets on hydrogen or relying on hybrids in the short-term. They point to a U.S. Department of Energy study that says even if all cars were of the hybrid variety, this country would still consume the same amount of energy in 2025 as it does today. "Hybrids are a transition technology—not a means to reduce the overall reliance on oil," says Jeff Seisler, executive director of the European Natural Gas Vehicle Association.

Today, 2.8 million natural gas vehicles operate worldwide. Of those, 130,000 are in the United States. Italy, which has been using such vehicles since the 1930s, now has 400,000 of them. The U.S. Natural Gas Vehicle Association says that if the number of such vehicles climbed here to 10 million—230 million cars are in the U.S.—it would only increase the demand for natural gas by 3-4 percent a year. The environmental benefits are noticeable compared to conventional vehicles: almost no particulates, little carbon monoxide and only 15 percent of the smog-forming hydrocarbon emissions. Moreover, the global warming gases that include carbon dioxide and methane amount to 20-25 percent less.

Making Cents

If alternatively-fueled vehicles make sense today, what's stopping them? For starters, the price of natural gas is also expected to remain high, at more than \$5 per million BTUs. And, further, there's no coherent formula at least in the United States as to how to replenish the supply to keep up with demand. A more sensible policy, say pragmatists, is to just increase the fuel efficiency standards now required of cars and trucks.

But, according to Seisler, natural gas will always be more attractive than oil not only because of its environmental virtues but also because it will always be comparatively cheaper. The economics of such projects would become more attractive, he adds, if government took a more proactive role by enacting tax-favored rules and bringing auto and oil groups into the fold. By diversifying their portfolios, oil producers could extend their petroleum reserves, and they could earn decent margins from the sale of their natural gas. At the same time, auto makers know that environmentally cleaner cars are good PR.

Indeed, it's the focus on cleaning the air and the high price of oil that has enraptured lawmakers on Capitol Hill. Rich Kolodziej, president of the Natural Gas Vehicle Coalition in the United States, says that the current \$44 a barrel price won't be coming down anytime soon because the oil producing countries are already operating at capacity. That phenomenon is, in part, happening because China has been sopping up much of the world's oil demand—a scary consideration, he adds, when China has fewer cars than this country did in 1913. As it adds more and more cars, the demand for oil there will drastically increase.

Energy security and environmental worries have combined to assure stricter and more far-reaching laws. The goal is to reduce pollution and to facilitate the development of newer technologies that will put more environmentally-friendly cars on the road. The Energy Policy Act (EPACT) of 1995, for example, is a mandate that covers federal, state and certain "fuel provider" fleet vehicles. Under EPACT, "fuel provider fleets," such as those operated by utilities, are required to use alternatively-fueled vehicles in 90 percent of their covered vehicles. That category includes light duty cars and trucks, although the law is replete with loopholes.

Meantime, the Clean Efficient Automobiles Resulting from Advanced Car Technologies (CLEAR ACT) is now pending before Congress. That would provide enhanced vehicle tax credits and fuel credits based on gasoline gallon equivalents. It would also give tax credits if fueling infrastructure is built. One of the aims, says Kolodziej, is to displace commercial vehicles and to cut emissions from the associated trucks. At the same time, Congress has been enacting tougher emissions standards such as the one that governs sulfur in diesel fuels.

Forces Must Converge

At least one utility has embraced the cause. Sempra Energy approached a local credit union to help finance such cars in Southern California. Energy First CU said OK, and agreed to offer consumers discounted loans. Meanwhile, the utility was able to persuade state lawmakers to give such drivers special privileges during rush hour as well as convince local politicians to allow free metered parking in downtown Los Angeles.

Such promotions have brought national attention and indicate that under the right conditions those products would sell. "Attractive vehicles that are reasonably priced and easily serviceable, combined with readily available fuel, are on the market today," says David Demers, CEO of Westport Innovations Inc., which markets natural gas engines. "As demand rises, and new commercial technology is quickly brought to market, options for consumers and other users will only increase."

Many consumers are proactive, buying hybrid vehicles as well as purchasing green power through their utilities. But, as that movement in the power sector suggests, the high-price and sophistication of technology has prevented fast-paced growth. Because of that, many people still lack the awareness to pursue those clean energy options. Likewise, the advancement of alternatively fueled vehicles will come when the economic and political environment are more inviting.

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