Hybrid Vehicles

by Sam Williams
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Evgeny Friedman, with slicked-back hair and Adidas trainers -- talkative in two languages and on two cell phones -- is the no-nonsense co-owner of Taxi Club Management Inc., managing a fleet of 650 cabs that cruise the streets of New York. Talk to him about the City Council's plans to replace the city's taxis with hybrid vehicles, and he has a...well...hybrid reaction.

The typical hybrid vehicle combines a gas engine with an electric motor, using the gas engine to charge up the electric motor, and the electric motor to supply supplemental power when needed. The result is about half the gas consumption of a regular vehicle. It also means more headaches for mechanics learning to deal with the added complexity.

"My mechanic has to wear a rubber suit just to avoid electrocution," says Friedman.

Complications aside, however, Friedman is a big fan of staying one step ahead of the technology curve. That is why, when the Taxi and Limousine Commission offered up its first set of hybrid vehicle medallions at auction this spring, Friedman and his partners ponied up an $8 million bid for 18 medallions.

"It's a no-brainer," he says. "Look at gas prices now and look at the Middle East. Within five to six years there's not going to be a regular gas taxi on the road. Every cab you see will be either hybrid or alternative fuel."

And, he says, "with hybrid vehicles, my drivers don't have to put in so many hours, and I don't have so much turnover."

Friedman is not the only enthusiastic pioneer. Hybrids are a can't-miss both politically and fiscally. Mayor Michael Bloomberg was equally enthusiastic in May when he signed a law requiring a 20 percent boost in city fleet's fuel economy through additional hybrid vehicles.

But they are, by definition, an imperfect solution, especially in a city already earning poor marks for air quality.

No Hybrid Meeting NYC Standard?

In the course of putting the hybrid medallions to use, Friedman and his partners have hit a major bureaucratic pothole. His company received a congratulatory note from the commission after winning the auction and had its initial $486,000 deposit accepted. A few weeks after the deposits, however, the bad news arrived. Citing a 2001 mandate on minimum back seat leg room for authorized cab models, the commission said it could find no hybrid models available yet on the market that met the current standard.

Friedman promptly filed suit in local court to get a resolution on this regulatory Catch 22. He suspects that somebody inside the Taxi and Limousine Commission chafed at the medallions' reduced cost. The usual market price for a New York City taxi medallion is $800,000, meaning Friedman and his colleagues received a 40 percent subsidy at city taxpayers' expense . Given the cabs' experimental status, however, he expects to spend the bulk of that subsidy on maintenance costs: "At the end of the day, I'll probably break even."

Taxi and Limousine Commissioner Matthew Daus, meanwhile, says the key sticking point isn't cab company buy-in so much as manufacturer buy-in. Taxi cabs, much like police cruisers, undergo a rigorous qualification process, focusing on everything from interior amenities to long-term durability. In the case of the Crown Victoria, currently the most popular model among city cabs, the Ford Motor Company went out of its way to build a special New York City model. So far, no manufacturer has stepped forward to do the same for hybrid vehicles.

"There's no one who's told us yet that they want to focus on this as a market," Daus says. "There's been give and take, but right now, [the manufacturers] have not presented vehicles to us and asked them to put them on the road for testing."

Bill To Push Hybrid Cabs

The New York City Council recently passed legislation to help break the impasse. Three years after authorizing 900 new medallion sales on the condition that nine percent go to hybrid vehicles at a discounted price, the council passed a bill that now makes it possible for all new medallion holders to operate hybrid cabs. Lauded by environmental groups such as the Coalition Advocating for Smart Transportation and the Natural Resources Defense Council, the bill leaves it up to the commission to decide which exact models qualify but puts a 90 day limit on the deliberation process.

Although the bill still awaits the mayor's signature, Daus says the commission is ready to accept the council's challenge. It is currently in talks with Ford and Toyota about taxi versions of the Escape and Highlander SUV models respectively. The Toyota Prius, while currently the most-recognized symbol of hybrid technology to most U.S. consumers, remains "totally unworkable" Daus says because of interior legroom limitations.

"We're excited about the opportunities opening up, but we've had to be proactive just to get to this point," Daus adds. "Usually the manufacturers come to us and say, 'Can this be a cab?' In this case, none of the vehicle models existed until a very recent period."

As for Friedman, he remains in limbo, waiting to see if the medallions he legally purchased at a discount also qualify for the new program. He expects a court to resolve the issue this summer.

"I hate to go up against the TLC, because, to be honest, the TLC has made me a lot of money," he says. "I just want to close this issue and put these vehicles on the road and make TLC part of the solution."

HYBRID BUSES IN HARLEM

Attempts to put hybrid diesel buses on the streets of Manhattan have drawn less attention and, interestingly, less acclaim from local environmental groups. Chalk it up to diesel's dirtier reputation as an air pollution source and a still lingering dispute over bus depots north of Central Park.

The dispute began with a 1998 deal between West Harlem Environmental Action, a group that goes by the acronym WE ACT and the Metropolitan Transit Authority to put more "clean air" buses burning compressed natural gas instead of diesel on Manhattan streets. Backed by Governor George Pataki's office, the deal pegged the Manhattanville bus depot at 133rd St. and Broadway as the most likely site, although left the site open for negotiation.

In the following years representatives of New York City Transit, the MTA agency responsible for public bus and subway transit inside the five boroughs, pressed to make the

Mother Clara Hale Depot, a smaller facility located at 146th and Lenox Ave., the main site for compressed natural gas buses, noting the smaller cost of re-conversion.

According to Swati Prakash, environmental health director for West Harlem Environmental Action, the negotiation process began to falter around 2003, the year New York City Transit opened a new depot at 100th Street and closed one of its two remaining depots in Lower Manhattan. When the agency announced a year later that it would be housing hybrid diesel buses instead of compressed natural gas buses at the Mother Clara Hale depot, negotiations broke down completely.

"We were waiting for the agreement to wend its way through the legal department," says Praksash. "Then we read a story in the New York Times saying that the MTA is set to use hybrid-diesel in its buses."

Prakash says hybrid buses are an unsuitable compromise for her group, because Harlem and nearby neighborhoods already boast some of the nation's highest youth asthma rates. According to a 2003 Harlem Hospital study, one in four Harlem children has asthma, more than four times the national rate as determined by the Centers for Disease Control.

Linking those rates directly to diesel is tough, but not impossible. Diesel engines tend to be more efficient than regular fuel and compressed natural gas engines, lowering the number of carbon-based "greenhouse gases" produced as well as overall fuel consumption. At the same time, however, even the cleanest-burning diesel engines generate soot and ozone, two chemical "triggers" of youth asthma according to the American Academy of Allergy, Asthma and Immunology.

"Despite tighter regulation of air pollution, widespread diesel engine use generates microscopic particles that penetrate deep into human lungs and circulation," reads an Academy summary of a recent health journal article. These particles contain chemicals that lead to cell damage.

For New York City Transit, the choice of diesel hybrids over compressed natural gas comes down to cost. In a 2003 study published by the U.S. Department of Energy, New York City Transit noted that hybrid diesel buses require no major capital investments in terms of fuel

storage, resulting in a $1,800 incremental cost per new bus vs. an $8,000 incremental cost per compressed natural gas bus.

So far, New York City Transit has already seen delivery on its first major order of 125 hybrid buses and is slated to have at least 325 operating on Manhattan streets by the end of the year. In the meantime, members of WE ACT and their Harlem neighbors have taken their complaints to the MTA board. In May they asked the board to resume talks on a natural gas depot above Central Park but left without a commitment.

Prakash is undaunted. She labels her group's appearance at MTA headquarters a "show of numbers" as her group gears up to remind neighborhood voters of the deal forged back in 1998.

"The MTA already sites six diesel bus depots above 99th Street," she says. "Community residents are not going to let this go."

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