

## Hybrid Taxis Give Fuel Economy a Lift

Most people recognize the classic yellow-and-black taxicab, but some taxis are adopting a new color—green. Clean Cities helped Boston and Cambridge, Massachusetts, and San Antonio, Texas, create hybrid taxi programs that cut gasoline use and air pollution while pleasing drivers and passengers alike.

### Better Mileage, Cleaner Air

Each year, taxis average 55,000 miles of driving. Most are Ford Crown Victorias, with a city fuel economy of about 16 miles per gallon (mpg). In contrast, the hybrid electric vehicles (HEVs) most commonly used as taxis do much better: The Toyota Prius gets 48 mpg in the city, the Ford Escape 34 mpg, and the Toyota Camry 33 mpg. Boston CleanAir CABS founder John Moore estimates that switching the entire Boston fleet of 1,900 taxis to HEVs would save about 5 million gallons of gasoline annually. In addition, hybrid taxis reduce smog-forming and greenhouse gas emissions, as well as create a green image for a city. “Taxis and taxi drivers are often the first spaces and people visitors see when they come to a city,” says the Boston Environment Department’s Jim Hunt. “They can be your best ambassadors.”

### Three Avenues to Success

In addition to an up to \$3,000 federal tax credit that helps offset the incremental costs of a hybrid taxi, Boston’s CleanAir CABS program offers two major incentives for operators and owners to run hybrid taxis. HEV drivers get two “front of the line” passes for each airport shift, allowing them to fit in two extra trips daily. Hybrid taxi owners who lease vehicles to drivers can charge drivers \$15 more per shift to lease a taxi, enabling an owner to earn more than \$5,000 annually. The program calculates that an owner will save \$20,000 per HEV over six years. Twenty months after the program started, about 50 hybrid taxis were on Boston’s streets. The voluntary program proved so successful that Boston instituted a mandatory program requiring all taxis to be clean air cabs by 2015. Compressed natural gas taxis also qualify for this program.

Cambridge started its hybrid taxi program in partnership with Whole Foods grocery stores. In exchange for exclusive, three-year rights to display advertisements on the



Whole Foods received advertising rights for sponsoring Cambridge’s hybrid taxis. Photo from CleanAir CABS

taxis, Whole Foods made six donations of \$5,000 toward the purchase of six HEVs. The city provided an additional \$10,000 per vehicle, using funds from the auction of two taxi medallions. Although Whole Foods is no longer providing grants, the city continues to do so. As of March 2009, the program has resulted in 15 hybrid taxis.

San Antonio’s program issues an additional taxi permit for each conventional vehicle replaced with an HEV. To prevent one fleet from obtaining all the permits, the largest company is allowed to replace only 1% of its fleet each year (six vehicles), while smaller companies can replace up to two vehicles. As of 2008, more than 70 of the city’s 843 taxis were HEVs. In fact, the statewide Texas Green & Go Clean Taxi Partnership has built off the San Antonio program’s success.

### Lessons Learned

Leaders of the Boston, Cambridge, and San Antonio hybrid taxi programs learned several lessons that can help other cities institute successful programs.

### Bring People Together

Creating taxi programs requires cooperation among businesses and government agencies such as the city hackney



or licensing division, city public health commission, city environmental department, state energy office, and port authority. Clean Cities coalitions can bring together stakeholders and provide “champions” to coordinate them.

It is important to involve taxi company representatives and drivers from the beginning to earn their buy-in and identify the most appropriate incentives. In San Antonio, even owners who initially opposed the program have adopted HEVs, partly because the program encouraged open dialogue.

### Understand the Business

Understanding a city’s taxi structure is essential. Some cities, such as New York and Boston, license taxis via medallions, which are limited in number and have significant property value. In contrast, cities with permit systems can easily change the number of taxis, but the permits do not carry the same financial weight. The relationship between drivers and companies also varies. Some companies own vehicles and have drivers rent them, whereas drivers act as independent contractors for other companies.

### Know What Drivers Need

Drivers are more likely to buy into incentive programs if they know the benefits of HEVs. For drivers, fuel cost savings are paramount. Some hybrid taxi drivers report cutting fuel costs by more than half. Drivers also like that HEVs improve customer satisfaction. “People like it because it’s green,” says James Christie, a Boston HEV driver. Some drivers report receiving larger tips when driving HEVs, and companies receive special customer requests for HEVs.

### For More Information

Visit the Boston CleanAir CABS Web site at [www.bphc.org/bphc/cleanaircabs.asp](http://www.bphc.org/bphc/cleanaircabs.asp), and contact George Fiorenza of Cambridge’s Ambassador Brattle Cab Company ([gfiorenza@brattlecourier.com](mailto:gfiorenza@brattlecourier.com)).

However, some drivers do find the size of HEVs challenging with the trunk space limiting how much luggage—and thus how many passengers—they can carry. This depends in part on driver experience and vehicle model. Paul Lex, San Antonio’s first hybrid taxi driver, says he can fit as many as five bags in his Prius’ trunk, whereas some other drivers can fit only two. Some HEVs, such as the Escape, have more trunk space than the Prius.

### Know What Owners Need

Because drivers pay for fuel, taxi company owners don’t profit from lower gasoline use, but they do benefit from greater driver satisfaction. Companies in Boston and San Antonio report having waiting lists of drivers eager to use HEVs. “If I try to take them away, it’s like pulling teeth,” says Miguel Constancio, operations manager at San Antonio Yellow Cab.

Owners also benefit from the longevity of HEVs. Most Crown Victorias in taxi service are used police vehicles. In Boston, these vehicles can be used for only three years before being replaced, but the city allows hybrid taxis to be used for up to six years. HEVs also can require fewer repairs. Cambridge driver George Fiorenza estimates he had to replace his Crown Victoria every 18 months, compared with the decade he expects to get out of his HEV. Lex says his HEV still had 30% of its brake pads left at 130,000 miles because of the regenerative braking system.

High initial cost is the biggest hurdle for owners. HEVs cost \$25,000 to \$30,000, compared with \$7,000 for the used Crown Victoria with a “police package.” Ongoing costs are also a concern. The CleanAir CABS program estimates that most HEV drivers will replace the \$7,000 battery once during the vehicle’s lifetime. Although HEVs might require less maintenance than conventional taxis overall, some repairs can be more costly. They may require expensive parts and servicing at a dealership or special equipment and training for in-house maintenance staff. Collision insurance payments also can increase because HEVs generally are worth more than conventional taxis.



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