

# Green Team Times



## Towns discover benefits of green fleets

By **Stephanie Seidmon**, ANJEC volunteer

The average American car emits 11,450 pounds of carbon dioxide each year, according to the US Environmental Protection Agency (EPA). While this greenhouse gas is one of the greatest causes of climate change, cars also emit volatile organic compounds, carbon monoxide, lead, benzene, sulfur oxides, and nitrous oxides that pollute our air – damaging not only our atmosphere, but our health, too. Today, consumers are calling for cleaner cars, and companies are supplying them. These greener vehicles, using technologies such as hybrid electric engines, electric fuel cells, compressed natural gas, propane and biofuels, are populating the markets, and New Jersey municipalities looking to decrease their carbon footprints are exploring their options.

### Montclair takes a green leap

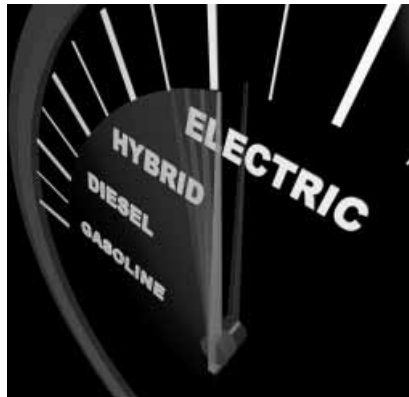
For a few towns, the experiment has been successful. Montclair was one of the first towns to discover the benefits of having a green fleet. What inspired them to jump in so early on? Air quality. Essex County has the highest rate of asthma in New Jersey, a statistic that correlates with the large amount of particulate matter found in the air. Compressed Natural Gas (CNG) is a type of fuel in which natural

gas is stored under pressure in containers that can then be used to power a car. Use of this technology lowers particulate emissions by 75-90 percent. For Montclair, this meant cleaner air and clearer lungs, a duet the municipality simply couldn't resist.

The town leased six Honda Civic GX CNG vehicles, and received a \$6,000 per car rebate from New Jersey's Board of Public Utilities, so they didn't pay extra for their green fleet. And while they didn't pay extra for fuel, they didn't pay less either. "The price of natural gas fluctuates just as the price of oil does," said Gray Russell,

Montclair's Environmental Coordinator. But this green fleet wasn't about saving money; it was about saving lives by preventing toxic chemicals from entering the atmosphere. And according to the town, the save was easy. After the cars drive around all day, they return to the municipal parking lot to refuel overnight using a system called FuelMaker that taps into the natural gas line that supplies the Public Works building with gas. The slow-fill engines are convenient for overnight charging.

The most difficult part of the process was actually getting the drivers to trust the new technology. "People were suspicious (of the cars), and thought they would blow



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up or something,” Russell said, “but once they got used to them, that fear disappeared.” In fact, CNG vehicles are safer than gasoline-powered ones, because the flammability range for natural gas is much narrower. Overall, in terms of the safety of driver, the safety of the exhaust-inhaling public, and the environment, Montclair’s CNG green fleet has proven to be extremely effective, affordable, and replicable as a model for other municipalities. But most importantly, now that people trust eco-technology, Russell says, “It is a platform for more, even greener change.”

### **A teachable opportunity in Lawrence**

Another green fleet in New Jersey began not in a municipality, but in a school, yet the program is an excellent example of how we can use our creativity to invent new ways to power our vehicles, our minds, and our children. At The Lawrenceville School in Lawrence Township, students and faculty united to use one problem to solve another. The school cafeteria was using vegetable oil to cook food, and after it did its job, the oil had to be discarded. Meanwhile, students and faculty were becoming increasingly aware of the unconstructive and unsustainable aspects of the automotive and oil industries. So in 2007, they devised a way to turn the leftover cooking oil into biodiesel fuel, and they now use this fuel to power their Outdoor Programs vehicle and some maintenance equipment.

Unlike conventional fossil fuels, this biofuel doesn’t need to be mined or drilled for; it is plant-based, so it gets its energy from sunlight through the process of photosynthesis. It’s also much cleaner than fossil fuels in terms of carbon dioxide, particulate matter, sulfur oxides, and nitrous oxides. At the school, after chicken nuggets finish their mid-morning swim in the deep fryer, the students themselves convert the leftover oil into biofuel, allowing them to visualize and experience the difference they’re making in the planet.

They now churn out 100 gallons of biofuel each month, and what doesn’t get used at the school is donated to a local organic cherry farm, which uses it to power its farm equipment. While the saved emissions from using biofuel warrants applause, the true success of this program lies within the students, who will use these learned principles to bring about more creative green changes in the future.

### **Westwood hybrids take to the streets**

As far as fleets go, municipalities tend to invest the most money and the most vehicles into their police departments. But due to the specific needs of these cars (sirens, secure radios, high-speed capability, etc.), environmental impact is not a deciding factor when buying them. Westwood disagrees. After becoming the first town on the East Coast to integrate hybrid-electric vehicles into their fleet, they couldn’t be more satisfied. In fact, they were so pleased that they’ve purchased two more since their first Ford Escape Hybrid was placed in service on October 25, 2007.

What initially inspired this mature community to purchase the hybrid was the cost of fuel. Around the time of the purchase, oil prices were predicted to climb near \$4 per gallon, and police car fuel efficiency was averaging around 5 miles per gallon. Comparatively, their hybrid uses minimal fuel when driving under 25 miles per hour, and otherwise gets about 20 miles per gallon. At \$2.40 per gallon, the price of gasoline on the hybrid’s first day at work, the municipality calculated that it would save them almost \$21,000 per year! In other words, the car would pay for itself in around 14 months.

For the Westwood Police Department, the switch was effortless. With many stoplights and regular traffic congestion, the town never sees high-speed chases, so high-powered vehicles aren’t really necessary. Residents have been supportive. In fact, police officers claim the eco-friendly cars have actually improved their relations with town residents.

The fact is that hybrids really do save fuel and curb emissions. In stop-and-go traffic especially, hybrid engines burn very little fuel. Moreover, regenerative braking technology captures the heat usually wasted while braking and uses it to recharge the battery. Though it started as a pilot program, the Ford Escape Hybrid has been so well received that town officials are now advising other municipalities interested in following suit.

Today, a variety of green fleet technologies are available to choose from, all of which offer different advantages and achieve various goals. But whether the goal is to stop asthma, instill important values in children, reduce greenhouse gases, or simply save money, changing mindsets seems to be the biggest barrier. As Russell puts it, "Change is tough. But the hurdle is neither financial nor technological. It's psychological."

Municipalities are also eligible for rebates from New Jersey's Clean Energy Program for purchasing alternative fuel

## More good reasons to green the fleet

Communities can earn points toward Sustainable Jersey certification by completing one to six "green fleets" actions, each worth 10 to 30 points.

They include:

- conducting a fleet inventory
- driver training
- purchase of alternative fuel vehicles
- conversion of vehicles to alternative fuel
- achieving fleet efficiency targets
- adopting behavioral policies

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vehicles or converting existing vehicles to run on alternative fuels. See <http://www.njcleanenergy.com/commercial-industrial/alternative-fuel-vehicle-rebate-program> for more information. 