

MERCURY

Mercury Associates, Inc.
Fleet Management Consulting Simplified™

Fleet Management White Paper

Fuel Consumption Challenges and Solutions for North American Fleet Vehicle Operations

First of a Three-Part Series

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White Paper

Fuel Consumption, Greenhouse Gasses and
Alternative Fuels usage for Fleet Vehicles



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Table of Contents

Executive Summary	i
The Challenge	1
The Solution	1
1. Asset Management Practices	2
Vehicle Specifications	2
Cargo.....	2
Route Planning.....	2
Aerodynamics	2
Idle Time.....	3
On-road Motorcycles.....	4
Replacement Analysis.....	4
Right Sizing	4
Data Management – Exception Reporting	4
2. Driver Behavior Management	5
Awareness – Driver Training.....	5
Speed.....	5
Tire Pressure.....	6
Prior Route Planning	7
Reduce Idle Time	7
Premium Grades of Gasoline.....	7
Preventive Maintenance.....	7
Reduce Cargo Weight.....	7
Summary	8
About Mercury Associates	8

Executive Summary

In today's challenging economy, fleet managers know they must have (or develop) the skills necessary to embrace best management practices for the operation of their fleet assets. Reducing fuel costs, or when not possible, offsetting them with other fleet cost savings has become a vital part of many fleet operation plans. Mercury Associates has reviewed three major categories to consider for reduction of fleet costs as well as vehicle emissions and greenhouse gasses. Those categories are:

1. Asset Management;
2. Driver Behavior Management; and
3. Environmental Considerations.

In this first of a series of three white papers, we will discuss fuel consumption. Our focus will be on savings opportunities through better management of fleet assets and modifying driver behavior. The second white paper will concentrate on reduction of greenhouse gases and specifically carbon dioxide (CO₂) emissions. Our third white paper will focus on reduction of hydrocarbon and nitrogen oxides (NO_x) emissions through use of alternative fuels.

ASSET MANAGEMENT includes vehicle specifications, cargo, route planning, aerodynamics, idle time (including the consideration of on-road motorcycles to replace certain fleet vehicles), vehicle replacement analysis and renewal plans, fleet size reduction, and data management-exception reporting. Vehicle specifications may be the single most important decision a fleet manager can make since it relates to the two most costly areas of fleet operation—depreciation and fuel. Idling has become an area of debate and regulated in certain areas of the country. For example, commercial vehicles with gross vehicle weights over 10,000 pounds idling more than five minutes in California run the risk of fines up to \$1,000 per day. Running at idle speed dramatically reduces engine life and directly impacts fuel economy.

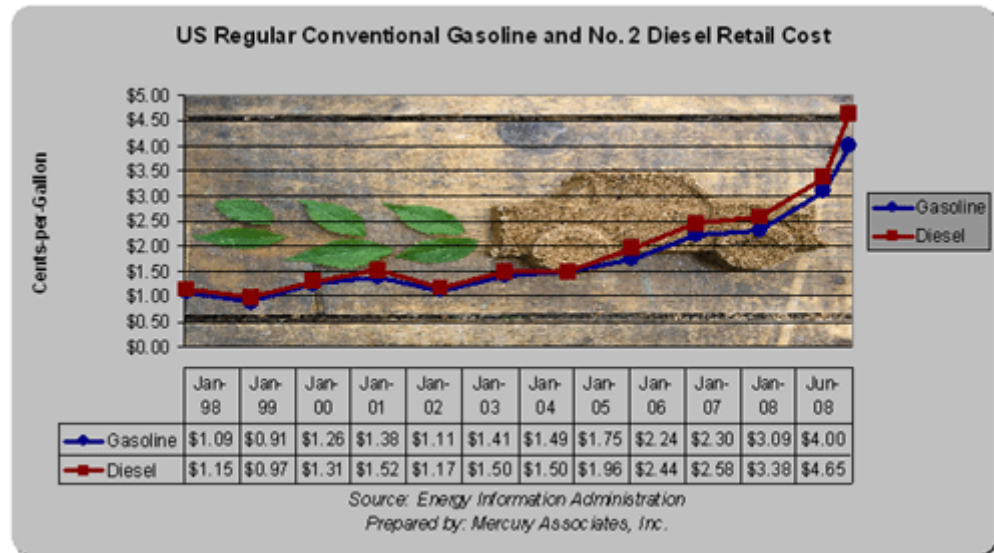
DRIVER BEHAVIOR MANAGEMENT is managing the person who has a direct impact on fuel economy—the vehicle operator. The first step to developing awareness is driver training, where even a few simple changes in driving techniques can produce sizable fuel savings. Speed has the largest effect on a fleet's operational cost with fuel economy diminishing above 60 miles-per-hour. Studies have proven that proper tire pressure not only enhances fuel economy but also improves the useful life of the tire itself as well as providing a safer vehicle operating condition. Under-inflated tires diminish vehicle mileage by increasing the tire rolling resistance, making it more difficult for the engine to move the vehicle along the road. Route planning and use of GPS devices can help drivers shorten drive times and avoid traffic jams. Drivers that purchase fuel at retail merchants should be educated that the recommended gasoline for fleet vehicles—which do not have high compression engines often found in sport or luxury vehicles—is *regular* octane and using a higher-octane gasoline than recommended by the auto manufacturer offers absolutely no benefit in performance or fuel mileage. In fact, the use of premium gasoline costs between 10 to 20 cents per gallon more than regular. Preventive maintenance such as engine tuning and air filters can improve fuel economy. Finally, teaching drivers about the importance of reducing cargo weight will impact the fuel economy of a fleet vehicle. How many drivers carry a few tools that are used once a year or snow chains in the middle of the summer?

Transitioning your fleet to new policies and procedures is a critical step – one that must be done seamlessly in order to maintain a successful fleet operation. At Mercury Associates, this will be accomplished through clear and frequent communication, flexible solutions and a dedicated staff who will ensure that every requirement is met. Furthermore, opportunities for best practices will be identified, and cost improvement recommendations will be offered. You can turn to the fleet professionals at Mercury Associates to assist you in navigating your way through the many facets of reducing fuel consumption and greenhouse gas emissions along with implementation of alternative fuels, while achieving the organization's financial goals.

The Challenge

Today, globalization has fundamentally and irrevocably altered our world. Global oil production has stalled at about 85 million barrels a day since 2005, while global economic growth, boosted by spectacular surges in China and India, has pushed demand for oil to unprecedented levels. Access to petroleum fuel remains a source of conflict in a world that is increasingly mobile and vulnerable to the cost of a barrel of crude oil. In this heightened state of global competition, businesses, governments, environmental concerns and ecology are melding into shades of **green**. By global standards, the price for gasoline in the United States is still relatively inexpensive at \$4.08 per gallon for regular gasoline as of mid-June 2008, an increase of almost \$1.10 per gallon from only one year ago. US diesel fuel has increased \$1.81 during the same period to a US average of \$4.65 per gallon.

Savvy fleet managers know that they must maximize investments. Embracing emerging best practices in asset management, including reducing fuel consumption, will lower operating costs, increase fleet productivity and better prepare their organization for the future. There appears to be widespread



consensus that, for a combination of environment and national security reasons, Americans want to consume less oil. As costs are likely to continue to climb, the auto industry is responding with alternative fuel and electric vehicles, hybrids, high-mileage clean diesel cars and substantial improvements in the fuel economy of conventional gasoline powered vehicles. However, automobile manufacturers are faced with the daunting challenge of trying to understand American culture and what consumers will want to drive in the future.

The Solution

Achieving best practices on fuel consumption will produce positive results in operating efficiencies and reduce fuel costs. Outlined below are three major categories to consider for reducing fleet costs as well as harmful emissions and greenhouse gasses. We have provided specific items to consider within each category when evaluating your current fueling policies

1. Asset Management;
2. Driver Behavior Management; and
3. Environmental Considerations.

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1. ASSET MANAGEMENT PRACTICES

Vehicle Specifications

Vehicle specifications are the single most important factor in achieving fuel economy, other than modifying driver behavior. Selecting the proper vehicle, weight, engine specifications, engine torque and power, drive ratios, number of axles and transmission for the required application is critical. For example, the proper engine and gearing for the intended operation is critical to achieving fuel economy. Selecting an engine with either too much *or too little power* can lead to inefficiencies in fuel economy. Replacing an eight cylinder with a six cylinder may actually result in *lower* fuel economy if the vehicle is straining to carry the cargo weight.

Mercury Associates' comprehensive consulting services range from broad-based reviews of all facets of an organization's fleet management practices, to a tightly focused analysis on a single issue such as fuel conservation. We can assist your organization in developing a plan to implement policies and procedures that reduce fuel expenses. If you have already implemented all reasonable fuel reduction practices, we can assist in finding other areas to reduce costs and stretch fleet budget dollars. You determine the scope of the work and we will act accordingly. Our recommendations will incorporate measurable, sustainable reporting metrics for long term success. One size does not fit all. By reviewing your operations, understanding the organizational culture and your fleet operations, Mercury Associates will utilize our breadth and depth of knowledge and experience to customize a program for you.

Cargo

The type, weight, distribution, loading and unloading of cargo play a significant part of overall fuel economy. Strategic loading (and therefore unloading) of cargo will improve fuel efficiency as engine demand diminishes. A survey by the National Private Truck Council (NPTC) found that private fleets run empty trailers 28 percent of the time. As a result, NPTC has approved a proposal to study the benefits of operating larger trucks that might reduce the overall total number of trucks on the road and the amount of fuel required for freight shipments. An extra 100 pounds can reduce vehicle MPG by up to two percent in smaller vehicles. As fleets shift to smaller, more fuel-efficient vehicles, it is important to consider the impact of cargo weight relative to the reported EPA mileage rating.

Route Planning

Modifications to vehicle routing can provide a significant opportunity for fuel savings. Of course, such an endeavor is possible only with vehicles that have a reasonably fixed route. The use of routing plans can help drivers avoid traffic, terrain and other road conditions that decrease fuel economy. Thoroughly reviewing the starting and stopping requirements can also help improve fuel economy.

Aerodynamics

When considering aerodynamics from a fuel economy standpoint, auto manufacturers are primarily looking at coefficient of drag. Manufacturers have made significant progress over the past two decades in reducing the drag coefficient. Approximately half the energy used by a truck traveling 55 mph is to simply move the air around the truck. At 65 mph about two-thirds of the energy is used to cut through the air. An aerodynamic model can increase fuel economy by an estimated 15 percent for over-the-road trucks according to the US Environmental Protection Agency (EPA).

White Paper

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Alternative Fuels usage for Fleet Vehicles

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Idle Time

The current national interest in reducing idling is, in part, being driven by the requirements of the Federal Clean Air Act, which resulted in clean air goals for America's most polluted areas and penalties in the form of loss of federal funding for transportation projects for failure to meet those goals. Reducing or indeed eliminating idling altogether saves money, energy consumption and reduces greenhouse gas emissions and can make big gains quickly.

Running a vehicle at idle speed dramatically reduces engine life with 60 minutes of idling time roughly equivalent to 80 to 120 minutes of driving time. Excessive idling directly impacts fuel economy since the vehicle is getting zero miles per gallon while stationary. A typical heavy duty truck will burn between half a gallon and one and a half gallons of diesel fuel per hour of idling, depending on the engine idle RPM and accessories in use. Research conducted by Argonne National Laboratories indicates that the total usage of petroleum spent by long-term idling of commercial trucks may exceed three billion gallons per year. The US EPA estimates (more conservatively) the amount of truck idling at one billion gallons per year, along with more than 11 million tons of carbon dioxide and over 180,000 tons of nitrogen oxides, as well as fine particulate matter and other harmful air toxics.

Congress has passed legislation, The Energy Policy Act of 2005, to promote use of auxiliary power units (APU) and to allow fleets with APU devices to increase the federal weight limit by 400 pounds. However, the Federal Highway Administration interprets the law as discretionary rather than mandatory and only a handful of states have passed laws recognizing the new weight allowance. With today's installed cost of APUs around \$8,000, fleets with lower idling ranges (i.e., less than 20 percent) may consider use of electric HVAC systems or even engine shut down devices as alternatives to APU devices.

A study conducted by the University of California Davis found that the number of hours spent idling by long-haul over-the-road (OTR) trucks varies greatly, but concluded on average idling time was about six hours per day or about 1,700 hours per truck per year. The fuel consumption during idling averaged about 1,600 gallons per year or \$8,000 with diesel at \$5 per gallon. More astonishing, about 10 percent of the trucks consumed more than 3,400 gallons or \$17,000 per year spent simply idling¹.

Some states have taken the idling decision out of the fleet manager's hands and have passed laws that prohibit the amount of time that a truck may idle. For example, in California, commercial trucks with a gross vehicle weight rating (GVWR) of more than 10,000 pounds may idle for only five minutes anywhere within the state. Fines for violating the rule begin at \$300 and can be as much as \$1,000 per day.

Public sector fleets have become accustomed to idling vehicles for a number of reasons, but many drivers seem not to make the connection between idle time, wasted fuel and increased emissions. State, local and municipal vehicle operators, especially those driving marked vehicles, should set the example for their community. Furthermore, vehicles are being fueled by very limited tax dollars; so a reduction in fuel waste can save public sector organizations critical fleet budget dollars while outreaching to the community.

Idling reduction or elimination is a significant challenge for law enforcement fleets due to the nature of their jobs and the types of equipment installed inside the vehicle. Many agencies have adapted idle reduction policies that make allowances for being on official duty while transporting prisoners, K-9 or other service animals. Considerations must be given to the fact that some older onboard computers must be rebooted if the vehicle is turned off. Less idling certainly will reduce the risk that the police vehicle itself could be stolen and will reduce the need to change engine rod bearings as a result of greater pressure extended during heavy idling. In sum, however, police, security and traffic enforcement fleets require a wide range of vehicles—from high performance police cruisers to personal mobility vehicles—and

¹ Institute of Transportation Studies, University of California, Davis. [Heavy-Duty Truck Idling Characteristics](#). Nicholas Lutsey, Christie-Joy Brodrick, Daniel Sperling, and Carolyn Oglesby.

White Paper

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protecting the public and environment is the most important consideration when agencies select vehicles and implement fleet policies.

Mercury Associates' is a consulting firm; not a fleet management firm. We are totally unbiased regarding your choice of vendors and the portfolio of your fleet. Our fees and earnings are not based on the number of vehicles in a fleet nor the amount of money spent replacing, fueling or servicing those vehicles. You are assured of receiving an independent knowledgeable recommendation as to fleet size reduction and how often to replace vehicles.

On-road Motorcycles

Recent trends include replacing patrol vehicles with two wheeled vehicles such as motorcycles and bicycles in an effort to reduce fuel consumption. Motorcycles, however, actually emit about 10 times more pollution per mile than light duty vehicles, according to research conducted by the California Air Resources Board (CARB). From a fuel savings standpoint, motorcycles present an opportunity to reduce fuel consumption roughly in half versus the typical light duty vehicle. Motorcycles also emit less carbon dioxide emissions (CO₂) as a result of less fuel being consumed. The US EPA revised on-road motorcycle

emissions in 2003² at which time it created a two-tier system which reduced emissions for the 2006 model year and the 2010 model year. In California, all 2008 motorcycles must meet the stricter 2010 federal standards. Even with the new, stricter standards, motorcycles are allowed to emit much greater amounts of pollutants than light duty vehicles, including SUVs and pickups. Moreover, motorcycle manufacturers are required to meet emission standards for a much shorter range of miles—the first 18,600 miles for a motorcycle versus 150,000 miles for light duty vehicles. Some may wonder why motorcycles are left “off the hook.” Essentially, the reason is because many technologies to reduce emissions (i.e., catalytic converters) are too large and heavy to function on most motorcycles. Moreover, the number of light duty passenger vehicles operating on US roads far exceeds the number of motorcycles. To that end, the US EPA and CARB devote more resources to the reduction of light duty vehicle pollution.

Replacement Analysis

By replacing older vehicles with new vehicles that pollute less and get better gas mileage, your fleet's environmental goals can be advanced, while saving on total fuel consumption and expenses. In fact, a properly prepared optimum replacement analysis can be augmented by a complete fleet renewal plan which will review and quantify various funding alternatives as well as present strategies for implementation of a renewed, more energy-efficient fleet.

Right Sizing

Fleets often have too many vehicles. There are numerous reasons for this, such as a perceived need for “spares,” an ineffective replacement program, lack of capital funding for new vehicles, lack of vehicle sharing, inadequate motor pool operations, failure to optimize the use of rental vehicles and equipment, and management inattention. Although reducing the number of vehicles in a fleet may not necessarily reduce fuel consumption, fleets can still save substantial money by eliminating unnecessary vehicles that require maintenance, licensing, insurance, etc. The savings can be used to offset increased fuel costs.

Data Management – Exception Reporting

A fleet can save substantial money by monitoring fuel exception reports. Utilizing exception reporting to drive fuel procurement compliance with company policies can help you achieve operating efficiencies, reduce fuel consumption and avoid improper fuel purchases. Most commercial fuel management programs have a variety of exception reports available to monitor activity such as multiple fill ups in a day and transactions in excess of specified number of gallons or dollars. Exception reports should be formatted to allow for easy reviewing when looking for anomalies such as gasoline purchases for a diesel

² US Environmental Protection Agency. EPA Finalizes Emission Standards for New Highway Motorcycles. <http://www.epa.gov/OMS/reg/roadbike/420f03044.pdf>. EPA420-F-03-044. December, 2003.

White Paper

Fuel Consumption, Greenhouse Gasses and
Alternative Fuels usage for Fleet Vehicles

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engine vehicle. Unfortunately, as fuel prices rise dramatically, some drivers may become tempted to devise ways to divert fuel to their personal vehicles—in other words, theft! Now is the time for all fleet managers to be more vigilant and thorough when reviewing fuel management exception reports and to work closely with the organization's auditing and internal security departments.

REAL-TIME REPORTING provides dynamic sharing and exchanges of information for immediate action at the corporate or local driver level. Extreme exceptions should be managed in real time so you can identify potential issues that require corrective actions in a timely manner. Quickly determining the authenticity of the transaction can prevent potential driver abuse or possible fraudulent transactions on stolen fuel cards.

POST EXCEPTION REPORTING is typically done on a monthly basis to look for a pattern of discrepancies, establish fleet operating averages, identify exceptions by vehicle or driver as well as integration with other fleet operating costs, such as vehicle maintenance, accidents and depreciation in order to determine the total cost of operating the fleet.

2. DRIVER BEHAVIOR MANAGEMENT

Driver performance is the most significant factor when considering all factors that impact fuel economy and, as most fleet managers know, it is often easier to manage the asset than the person operating it. However, even small changes to driver behavior can help you maximize every gallon of fuel consumed.

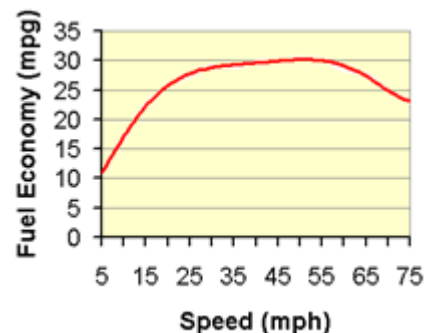
Awareness – Driver Training

Consider this: every time a driver steps on the brake pedal, the fuel consumed to get the vehicle up to speed is suddenly wasted in the form of heat generated by the braking action. Even highly experienced drivers can boost their skills and enhance driving performance through driver training programs. According to the US EPA, driver-training programs can save fuel and reduce greenhouse gas emissions. A few simple changes in driving techniques (i.e., cruise control, gradual acceleration / braking, engine idling, anticipatory driving, optimal gearing, shifting practices, pacing speed between traffic signals) can produce sizable savings. Such changes can reduce driver stress (not to mention, reduce the number of speeding tickets), reduce the likelihood of an accident and extend the life of tires and brakes.

Speed

Speed has the largest effect on a highway fuel economy. All vehicles operate differently and therefore reach optimal fuel economy at different speeds or range of speeds; however, gas mileage typically decreases rapidly at speeds above 60 MPH. According to the US EPA, each five MPH over 60 MPH equates to paying an additional \$0.30 per gallon of gasoline. The EPA cites a fuel economy benefit between seven to 23 percent as producing equivalent gasoline savings of \$0.29 to \$0.94 per gallon.³

The cost of speed dramatically increases along with vehicle weight. According to various industry sources, typical OTR Class 7 or 8 trucks (80,000 GVWR) consumes about 0.5 MPG. An OTR driver reducing speed from 75 MPH to 65 MPH will save one MPG or \$0.08 per mile. For an OTR 18-wheel vehicle that travels 2,500 miles per week, the savings based on \$4.00 per gallon fuel cost is over \$24,000 per year.



³ US Environmental Protection Agency. <http://www.fueleconomy.gov/feg/driveHabits.shtml>. Cost savings based on assumed gasoline price of \$4.08 per gallon.

White Paper

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Speed also contributes to wear and tear costs. A 10 MPH speed reduction saves about 10 percent in tire life, because tires are running cooler, 10-20 percent in engine life (depending on engine size) and 20 percent in brake life because the driver is not slowing for other vehicles.

Tire Pressure

Studies have proven that proper tire pressure not only enhances fuel economy but also improves the useful life of the tire itself as well as providing a safer vehicle operating condition. Under-inflated tires diminish vehicle mileage by increasing the tire rolling resistance, making it more difficult for the engine to move the vehicle along the road.

Tire pressure monitoring systems (TPMS) were mandated by Congress to be standard equipment on all vehicles weighing less than 10,000 pounds (except trucks with dual rear axles) by the 2008 model year. Most pickups, light duty vans and sport utility vehicles fall into this weight category and TPMS have been standard equipment in many passenger cars and light duty vehicles since the 2005 model year. TPMS was proposed by the National Highway Transportation Safety Administration (NHTSA) after a 2001 highway study of over 11,000 vehicles found that 29 percent of light trucks had at least one tire under-inflated by 25 percent or greater. The NHTSA predicts 90 percent voluntary compliance with TPMS, meaning that the driver will react to the buzzer or flashing light and as a result check tire pressure. A more recent study published in July 2005⁴ concluded only 44 percent of all commercial trucks were within five percent of their target inflation pressures, with as many as seven percent out by 20 PSI or more.

Fleet managers should recognize that most TPMS only initiate a warning when a tire has *deflated to 25 percent or less* than the recommended inflation pressure. The system will also tell the driver when TPMS is not working properly. While TPMS is valuable to prevent severely deflated tires, it is not the end-all solution to optimize fuel efficiency. Drivers still should be instructed to check tire pressure (known as “pounds per square inch” or PSI rating) at least once a week while the tires are cold (i.e., before the vehicle ignition is started or the vehicle has been driven less than one mile). Tires on a vehicle driven more than one mile will take three or four hours to return to the “cold” state after parking the vehicle. Tire pressure specifications are posted on a sticker in the door jam of the driver-side door, in the owner’s manual and on the OEM or tire manufacturer’s websites. The maximum allowable pressure stamped on the tire casing should never be considered the optimum pressure.

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2. Best Management Practices Reviews
3. Business and Strategic Plans
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5. Executive Recruitment
6. Expert Witness
7. Facility Planning
8. Fuel Management Tools
9. Lease versus Buy Analysis
10. Information Systems Evaluations
11. Market Research Studies
12. Outsourcing Studies
13. Personal Use Chargeback Analysis
14. Policies and Procedures Developments
15. RFP Development, Management and Evaluation
16. Safety Reviews
17. Training and Analytical Tools
18. Utilization Analysis and Rightsizing Studies
19. Vehicle Replacement Planning
20. Vehicle Specification and Selection

⁴ Tech Brief: Commercial Motor Vehicle Tire Pressure Sensor. Federal Motor Carrier Safety Administration. July 2005.

White Paper

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Alternative Fuels usage for Fleet Vehicles

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On average, tires naturally lose about one or two PSI per month as air escapes through the rubber. The amount increases during hot weather. The US EPA estimates for every one PSI under the optimal rate, the vehicle loses 0.4 percent miles per gallon. The US Department of Energy (DOE) estimates the average vehicle operator can improve mileage by 3.3 percent by inflating their tires properly.

Prior Route Planning

Driving “lost” can lead to backtracking, excessive idling and unnecessary miles, all major fuel wasters. Drivers should pre-plan their route and compare different routes since the shortest distance may not be the best gas savings route. Idling in heavy stop-and-go traffic can consume more gas than a longer route where less traffic allows the driver to keep moving at a consistent moderate pace. Drivers should be encouraged to utilize maps, various web sites now available on the Internet or a GPS device to help identify smart routes.

Reduce Idle Time

Extended idle time directly impacts fuel economy, since the vehicle is achieving zero miles per gallon while stationary. Fleet managers should encourage drivers to turn the engine off when idling for more than a minute or two (other than for unique applications such as police and fire rescue vehicles). Communicate to drivers that with modern fuel-injection engines that it takes very little gasoline to restart a vehicle. Finally, drivers should avoid the drive-thru lines at banks, pharmacies, and fast food stores; instead of sitting in line, park, get out and walk inside. Not only will they save fuel and excessive idling, air pollutants and carbon dioxide will also be reduced.

Premium Grades of Gasoline

Premium gasoline costs between 10 to 20 cents per gallon more than regular. Drivers that purchase fuel at retail merchants should be educated that the recommended gasoline for fleet vehicles—which do not have high compression engines often found in sport or luxury vehicles—is *regular* octane and using a higher-octane gasoline than recommended by the auto manufacturer offers absolutely no benefit in performance or fuel mileage. In the rare occasion of vehicle engine knocking while using regular gasoline, an occasional purchase of higher-octane fuel may be warranted. It should be noted that the octane rating of gasoline is not consistent across the country and each state establishes its own ratings. Drivers should check the yellow sticker on the gas pump to know exactly what octane they are purchasing.

Preventive Maintenance

IMPROPER ENGINE TUNING negatively impacts gasoline mileage by an average of four percent according to US government studies. Most important to mileage is a properly working oxygen sensor, which can increase or decrease vehicle efficiency by as much as 40 percent.

DIRTY AIR FILTERS impact fuel economy. Most drivers think vehicles run on fuel only. Actually vehicles run on fuel and oxygen. If a dirty air filter restricts this flow, vehicle performance and fuel economy will suffer.

Reduce Cargo Weight

Instruct drivers to clean out the trunk, back seat, cargo area and pickup bed and take out all unnecessary business and personal items that are adding gratuitous weight to the vehicle. For example, carrying snow chains in the summer only increases fuel consumption for no practical reason. As stated previously, the smaller the vehicle, the greater the weight will impact fuel economy.

White Paper

Fuel Consumption, Greenhouse Gasses and
Alternative Fuels usage for Fleet Vehicles

The logo for Mercury Associates, Inc. features the word "MERCURY" in a bold, blue, sans-serif font. The letters are slightly shadowed, giving it a three-dimensional appearance. The background behind the text is a dark blue gradient.

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Summary

With skyrocketing gasoline and diesel prices, many cities are reporting a sharp increase in public transportation use. Recently, there has also been an increase in the number of people commuting by bikes, scooters and motorcycles. Many consumers who have chosen biking mention fuel cost as a motivating factor, but most claim they are trading gas pedals for bicycle pedals for the health, fitness and environmental benefits. While many individual commuters have rediscovered bikes and busses (which may become part of an organization's plan to reduce greenhouse gasses), such transportation methods are typically not replacements for a fleet of vehicles.

Best practices in asset management, including fuel consumption as well as other practices on acquisition; maintenance and disposal, can make the difference between a productive, cost-effective fleet and a costly mistake.

As predicted, fleet operating costs continue to rise and fuel has been the most significant single factor in the escalating costs. We are all faced with managing cost better and smarter than in the past in order to sustain profitability. A by-product of increased fuel economy is a reduction in CO₂ emissions. With more EPA emissions regulations coming down the pike in 2010, we need to embrace change in our behaviors now. Not only will changes today deliver hard dollar savings, it will give you a head start on achieving environmental goals and becoming a "green" fleet.

Transitioning your fleet to new policies and procedures is a critical step – one that must be done seamlessly in order to maintain a successful fleet operation. At Mercury Associates, this will be accomplished through clear and frequent communication, flexible solutions and a dedicated staff who will ensure that every requirement is met. Furthermore, opportunities for best practices will be identified, and cost improvement recommendations will be offered. You can turn to the fleet professionals at Mercury Associates to assist you in navigating your way through the many facets of reducing fuel consumption and greenhouse gas emissions along with implementation of alternative fuels, while achieving the organization's financial goals.

About Mercury Associates

Mercury Associates, Inc. is an employee-owned consulting firm, incorporated in 2002 in the State of Maryland. The firm is headquartered in the Washington, DC area and has 30 employees located throughout the United States. The three co-founders and owners of Mercury all work full time in the firm, which has no other shareholders or outside investors. Mercury Associates is a US Small Business Administration and Department of Defense certified small business, and holds a 10-year contract with the US General Services Administration to provide fleet and logistics management consulting services to US federal government agencies under GSA's Logistics Worldwide (LogWorld) schedule.

Mercury Associates is an *independent* consulting firm dedicated to providing objective, unbiased advice and technical guidance to organizations that operate fleets. Our clients also include organizations that supply products or services to fleet operators, venture capital and private equity firms and other fleet industry investors, and professional and trade associations and other organizations that offer conference, trade show, research, and training and certification programs to fleet industry professionals. We do not provide contractual fleet management services and we do not market or sell other companies' products or services under channel