



•I.C.L.E.I
International Council for
Local Environmental Initiatives

GREEN YOUR FLEET

In cities and counties everywhere streets are swept, neighborhoods patrolled and important business conducted every day with vehicles owned by local governments. Maintaining a vehicle fleet is a key component of local governments' operations. Operating a fleet of vehicles comes at a price, however. Beyond the monetary cost, fleet vehicles represent a significant source of air pollution. Also, every gallon of fuel burned releases about 22 pounds of carbon dioxide (CO₂), the major pollutant causing global warming.

Fleets can play an important role in reducing global warming and air pollution emissions.

What to Do:



1

The first step is to document the impact of fleet activities by conducting an inventory of fleet vehicles, including the types of vehicles, how many there are of each type, and the type and amount of fuel that they use.



2

Once the fleet has been characterized, realistic goals can be set and measured. Goals should be set for reducing energy use, criteria air pollutants, and carbon dioxide emissions for the fleet.



3

There are many cost effective and practical measures that can “green” your fleet. Implemented wisely, the actions taken will not adversely impact the day-to-day operations of local government. In fact, many actions will result in significant savings. Measures include:

- ✓ “Right-sizing” vehicle fleets by downsizing and eliminating vehicles.
- ✓ Optimizing vehicle travel, operation, and maintenance.
- ✓ Substituting other travel modes, or reducing the need to travel.
- ✓ Purchasing fuel efficient, alternatively fueled, and electric vehicles.

The Result: Green Fleets™

Taken together, these steps – conducting a fleet analysis, setting emissions goals, determining and implementing actions to meet those goals – constitute ICLEI's Green Fleets™ process of greening local government fleets. Already proven effective, Green Fleets can help your city or county reduce greenhouse gas pollution, improve air quality, and save money.

WHAT SHOULD YOU DO TO GREEN YOUR FLEET?



DOWNSIZE VEHICLES

Does a building inspector need to drive a full size sedan? Probably not, but in many local governments sedans are still the vehicle assigned to staff, regardless of how appropriate the vehicle is to the duties that they perform. Matching duty requirements of staff to the smallest possible vehicle for the task is a critical component of a Green Fleets program. Smaller vehicles should be substituted for larger vehicles by phasing them in as new vehicles are purchased or by selling larger vehicles.

- *→ By purchasing 150 Dodge Neons instead of larger sedans **Metro-Dade County, Florida** is reducing its fleet CO₂ emissions by 600 tons a year.



OPTIMIZE VEHICLE USE

The manner in which fleet vehicles are used for travel in your city or county is a key determinant of the fleet's overall efficiency. Most importantly, schedule travel efficiently so that multiple tasks can be accomplished with one trip. With proper planning, staff should also be able to share vehicles for all or part of a trip. Software especially designed to optimize fleet vehicle routes can also be used to achieve large reductions in fuel use and emissions.

- *→ Route optimization for solid waste trucks in **Toronto, Ontario** is saving 140,000 gallons of fuel and reducing CO₂ emissions by 1,500 tons a year.



INCORPORATE EFFICIENCY INTO BID SPECIFICATIONS

Including a minimum fuel efficiency standard for each vehicle class in procurement specifications results in only the most fuel-efficient vehicles being purchased. Specifications can also be written so that the smallest and most efficient vehicle in its class is purchased. If life-cycle costing is used, the cost of fuel should be weighted heavily so that fuel savings accrued over the life of the vehicle are sufficiently taken into account.

- *→ Vehicle specifications in **Louisville, Kentucky** are based on the minimum power needed for a task, resulting in the purchase of smaller vehicles.



MAXIMIZE EFFICIENCY

A simple but important step that any city or county can take to improve the efficiency of its fleet is to ensure that regular maintenance is performed on its vehicles. Oil should be changed regularly and tires should be kept at the correct pressure at all times. Vehicles need to be operated in the correct manner as well. Employees should receive driver training and be awarded incentives for driving efficiently. Finally, establishing a policy against idling vehicles is a key component of a Green Fleets program.

- *→ **Edmonton, Alberta** increased average fuel economy by 20% when coaching employees on fuel-efficient driving.



ELIMINATE FLEET VEHICLES

In many cases cities and counties have more vehicles than they need in their fleets. By analyzing the operational needs of your fleet, and eliminating excess vehicles, non-critical trips will be discouraged and alternative forms of travel encouraged. Eliminating fleet motor vehicles in favor of bicycles can have substantial advantages as well. Employees can use bicycles for local trips. Moreover, putting police officers on bicycles offers crime enforcement advantages and substantial savings, as well as emission reductions.

- *→ The police department in **Dayton, Ohio** is saving 2,700 gallons of gasoline and 7.5 tons of CO₂ a year by using bicycle patrols instead of police cars.



BUY VEHICLES THAT RUN ON ALTERNATIVE FUELS

After "right-sizing" your fleet, larger vehicles will still be needed for many tasks. Because fuel efficiency gains are more difficult with medium- and heavy-duty vehicles, they are good candidates for the use of alternative fuels. However, not all fuels provide equal greenhouse gas and air quality emissions benefits. For this reason, consider using fuels like compressed natural gas (CNG), liquid natural gas (LNG), or propane (LPG).

- *→ One out of every three vehicles operated by **Fort Collins, Colorado** runs on propane, resulting in a reduction of 140 tons of CO₂ per year.



USE TRANSIT, BIKE, WALK, OR TELECOMMUTE

Is it necessary to drive to that meeting? Often the answer is no. Fleet vehicle usage can be substantially decreased if employees use other modes of travel. Depending on the distance; transit, a bicycle, or walking normally will suffice. Employees should be provided with transit passes and reimbursed when using transit or bicycles to travel for business reasons. Another option is to avoid travel altogether by using email, phone, or video technology to accomplish tasks by telecommuting.

- *→ By using advanced technology video-conferencing for its criminal justice department **San Francisco, California** is reducing 300 tons of CO₂ per year.



GO WITH ELECTRIC DRIVE

Vehicles with electric drivetrains will likely replace internal combustion engine vehicles in the future. Electric vehicles (EVs) powered by batteries and gasoline-powered generators (hybrids) are already available. These vehicles are appropriate for many tasks and, especially in the case of battery powered EVs, result in a substantial reduction in CO₂ emissions. Fuel cell vehicles powered by hydrogen are even better and are just beginning to become available. The only emission from these vehicles is water!

- *→ **Chicago, Illinois** is operating three transit buses that are powered solely by hydrogen fuel cells.

ADOPT A COMPREHENSIVE FLEET POLICY

GREEN FLEETS™



The best way to ensure the success of a Green Fleets program is to pass an ordinance or enact an executive order that formalizes the Green Fleets process. In fact, the inspiration for the Green Fleets program is the “Green Fleets” executive order that **Denver**, Colorado adopted in 1993. This important program was the first comprehensive policy for reducing greenhouse gas emissions from municipal fleets in the country. As a result of this policy Denver municipal fleets must:

- ✓ Decrease fuel expenditures by an average of 1% per year.
- ✓ Decrease CO₂ emissions by an average of 1.5% per year.
- ✓ Include precise miles per gallon targets in vehicle bid specifications.
- ✓ Reduce fleet size, miles traveled by fleet vehicles, and downsize fleets.

An ordinance enacted in 1999 requires that all city vehicles purchased by **San Francisco**, California must meet the ultra-low emission vehicle standard (ULEV) and also requires that 10% of cars and small trucks purchased be electric. While not as comprehensive as Denver’s ordinance, importantly, this ordinance addresses other issues such as fueling infrastructure, performance monitoring, and private fleets. Even if a formal policy can’t be enacted, local governments should consider centralizing fleet operations. Due to better fleet management **Monterey County**, California is saving up to 10,000 gallons of gasoline a year after combining all of its fleets into one.

FOR MORE INFORMATION

- ICLEI, Cities for Climate Protection Policy & Practice Manual, *Green Fleets: A Guide To Increasing Efficiency And Reducing Emissions From Municipal Fleets*, Toronto, Ontario, Canada, 38 pp., 1997.
- ICLEI, Cities for Climate Protection Case Study, *Case Study #41: Promoting Energy Efficiency in Municipal Fleets, Denver, USA*, Toronto, Ontario, Canada, 6 pp., 1995.
- Public Technology, Inc., *Greening the Fleet: A Local Government Guide to Alternative Fuels and Vehicles*, Washington, DC, USA, 164 pp., 1997.
- U.S. Department of Energy, National Renewable Energy Laboratory, Alternative Fuels Data Center: <http://www.afdc.doe.gov> or 1-800-423-1DOE.
- www.greenfleets.org



ICLEI’s Cities for Climate Protection Campaign (CCP) is a global effort to reduce the emissions of greenhouse gases from urban areas and to improve local air quality and urban livability. More than 350 local governments, including 68 U.S. cities and counties, are currently participating in the CCP. The Campaign operates training and technical assistance projects that focus on reducing emissions through energy-efficiency, renewable energy, waste management, land-use planning, and transportation improvements.

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The International Council for Local Environmental Initiatives (ICLEI) is an association of local governments dedicated to the prevention and solution of local, regional, and global environmental problems through local action.

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