

LICBDC's Guide to Going Green

LIC GREEN



Chapter 4: Transportation

A 2008 drop in fuel prices is not a reason to be complacent about managing transportation costs. The International Energy Agency in its *World Energy Outlook 2008*, warned that "current global trends in energy supply and consumption are patently unsustainable" and "the sources of oil to meet rising demand, the cost of producing it and the prices that consumers will need to pay for it ... [are all now] extremely uncertain...The era of cheap oil is over." ¹ The NY Times reports that lower oil prices now are discouraging investment in new oil production infrastructure, which will make it difficult to maintain current production levels when the economy recovers and energy prices rise again. Even if lower energy prices were to persist, fuel supplies will still continue to deplete, and cutting energy use and costs will be crucial. ²

Fuel costs will be increasingly volatile, and will tend to increase over time, perhaps abruptly.³ This directly affects owners of vehicle fleets. A firm with significant transportation needs will be affected indirectly. Higher commuting costs will affect employees. This section highlights ways to improve transportation efficiency and reduce costs for both commuting and fleet management.

1. Employee Commutes

In a survey on the effects of rising gas prices on commuting employees⁴, 33% of respondents said that they would leave their current job if they could find a comparable one nearby.⁵ The survey showed that workers are preoccupied, depressed, less attentive to job tasks, and feel less enthusiastic about going to work. Encourage employees to take less costly commuting options: taking the train or bus; cycling; walking; carpooling; purchasing more efficient vehicles; and, where possible, altering work schedules or telecommuting.

Walking and Bicycling

Walking or bicycling to work is good exercise and reduces traffic congestion, carbon emissions and air pollution. Encourage it by:

- Putting up posters in the office
- Having a "bike to work" week
- Offering subsidies for bike purchases
- Having a "conservation contest" with prizes for the most efficient commuter
- Requesting the City to install racks in front of building by visiting <http://www.nyc.gov/html/dot/html/bicyclists/>.
- Providing employees with the City bike map, downloadable at <http://www.nycbikemaps.com/maps/nyc-bike-map/>.
- Donating old bikes to Recycle a Bicycle. <http://www.recycleabicycle.org/support/donate>

Train, Subway, and Bus

The Pre-Tax Transit Benefit Program allows employees to use pre-tax dollars to pay for transit costs through employer-sponsored programs. If your company joins this program its employees will save roughly one-third on their commuting costs. For example, as of early 2009, a 30-day Metrocard would only cost \$50 instead of \$76. Employers also benefit, by up to \$96 per employee per year. <http://mta.info/mta/farebenefits.htm>.

Working from home

Some employees are able to work from home all or part of the time, sharply reducing their transportation needs – and your company’s environmental impact. While many managers fear employees may be less productive at home, some are actually more productive without office distractions.

Could telecommuting or rearranging schedules be effective for your company and industry? What if employees had the option to work from home once a week, or once every two weeks? If the average worker is spending \$60 on gas per week, allowing them to work from home one day a week would save them \$12 a week, or over \$600 a year. In 2008, Utah moved to a 4-day work week.⁶ State employees now work 10 hours a day from Monday through Thursday and have Friday off. Most employees are thrilled by the decision and enjoy having three-day weekends year-round.

In San Francisco, Citigate Cunningham encourages workers to stay home whenever possible, providing laptop computers and BlackBerries to enable telecommuting, and reimbursing them \$40 a month for high-speed Internet connections in their homes.⁷ Rejuvenation, a lighting manufacturer in Portland, Oregon, has gone to a four-day week, each workday 10 hours long.⁸

Employees concerned about high gas costs may find a four-day work week or the option of telecommuting to be attractive benefits.⁹

Carpooling

Carpooling can benefit employees who live too far away to walk and lack access to public transportation. Several ride sharing systems allow New York area residents to share cars and find carpool and van pool partners. Encourage using this method of commuting by offering preferred parking for carpoolers, or by setting up a company listserv to help identify and match employees who live near each other.

- Zipcar, <http://www.zipcar.com>
- CommuterLink, <http://www.commuterlink.com>
- Long Island Transportation Management, <http://litm.org>

Fuel Efficient Vehicles

The higher upfront cost of fuel efficient cars will be paid back quickly through savings on fuel costs. The US EPA Green Vehicle guide ranks cars on fuel economy (mpg), air pollution, and global warming ratings, comparing vehicles in the same model year on a scale of 1 to 10. The higher the score, the cleaner the car.¹⁰ <http://www.epa.gov/greenvehicles/Index.do>

2. Fleet Management

To reduce fleet costs and make operations more efficient, consider:

- Directing drivers to turn off the motor when vehicle is idle
- Joining the SmartWay Transport Partnership
- Purchasing alternative fuel vehicles or retrofitting existing vehicles
- Maintaining vehicles properly
- Driving slower
- Training drivers in more efficient driving habits
- Improving vehicle aerodynamics
- Using single wide-base tires and low viscosity lubricants
- Exploring intermodal shipping: moving goods by rail as well as by truck where it improves efficiency
- Reducing packaging and weight of products being shipped

Even if you do not own or operate a fleet, ask suppliers to adopt fuel-efficiency policies that cut costs and pollution associated with the goods you receive, such as altering shipping schedules or packaging weights.

For information from NYSERDA on transportation partnerships and incentives, please see <http://www.nyserda.org/programs/transportation/AFV/default.asp>

Don't Leave the Motor Running

Not only does idling waste money, but in New York City idling a vehicle longer than three minutes is against the law. Violators are subject to severe fines and/or imprisonment.¹¹

To eliminate idling time and reduce harmful emissions, when drivers load or unload goods or drop off or pick up passengers, they should turn the engine off as soon as possible. The engine should not be restarted until everyone is ready to depart and there is a clear path by which to exit the pickup area. Use the Idling Cost Calculator to see how much you'll save.

<http://www.epa.gov/region8/ej/dieselcalculator.html>

Reduce Packaging

The EPA WasteWise program can help any company that ships goods cut costs by reducing packaging waste, increasing efficiency of shipments, or by thinking creatively.

<http://www.epa.gov/wastewise/>

Virco Inc., a furniture manufacturer, minimized its use of standard four-chair cartons and minimized transport packaging by switching to a combination of cardboard and shrink-wrap within which up to eighteen chairs can be stacked. Allsteel, another furniture maker, bulk packs or blanket wraps its overhead storage units, and reduced packaging more than 90%.¹²

Alternative Fuels

Biodiesel fuel, made from soy oil or recycled vegetable oil, can be used by diesel vehicles without engine modification. These vehicles easily switch between biodiesel and diesel. Its increasing consumer market popularity has prompted many stations to carry it nationwide.¹³

Blends of biodiesel and standard diesel fuel are designated using the letter “B” and a number that indicates the percentage of biodiesel being used. For example, B20 utilizes 20% biodiesel while B99 uses 99%.¹⁴

Compressed natural gas, CNG, is an alternative fuel that can be used for transit buses, school buses, garbage trucks, and delivery trucks. UPS has purchased 1,100 CNG delivery vehicles.

FedEx uses hybrid electric trucks.¹⁵ These vehicles have cut emissions by 90% and increased fuel efficiency by 50%.¹⁶ They operate much like other trucks so there is very little retraining involved. Speed and performance of hybrid vehicles are comparable to traditional vehicles, and improve every year. Hybrid vehicles are also cleaner and quieter than normal delivery trucks, reducing their negative impact on the quality of life in neighborhoods through which they pass.

For availability of heavy-duty alternative fuel vehicles, see the Alternative Fuels Data Center Vehicle Make-Model Search at:¹⁷ http://www.eere.energy.gov/afdc/progs/vehicles_search.php

The EPA SmartWay Transport Partnership

SmartWay offers these tips for reducing fleet energy use:¹⁸

- Idle reduction
- Automatic tire inflation systems
- Improved aerodynamics
- Improved freight logistics
- Driver training
- Single wide-base tires
- Low viscosity lubricants
- Intermodal shipping
- Reducing highway speed
- Weight reduction

- Hybrid power train technology
- Purchase from local suppliers.
- Maintaining fleets. Keeping your vehicles maintained well will not only increase short-term performance, but keep them running well long-term.
- Purchase alternative fuel vehicles.
- Rethink your shipping process.
- Cut down on packaging. If you can make your products smaller and more efficient, you can ship more in one shipment, reducing overall costs.
- Hire local drivers

The SmartWay loan initiative uses SBA Express Loans and partners with Bank of America, Business Loan Express, Superior Financial Group and other SBA lenders to help small trucking companies finance the purchase of SmartWay Upgrade Kits. The kits include idle-reduction devices, low rolling resistance tires, aerodynamic equipment, and exhaust after-treatment devices. Further, the kits can improve truck fuel efficiency by 15 % and save more than \$8,000 in fuel costs annually, while significantly reducing emissions of soot and nitrogen oxides.¹⁹
<http://www.epa.gov/smartway/financing.htm#kits>.

Participating lenders will provide quick approval and affordable monthly payments. Small trucking firms can borrow from \$5,000 to \$25,000, with no collateral and flexible terms, by making an easy on-line or telephone application.²⁰

Use the Smartway Calculator to determine the cost of various efficiency technologies.
<http://www.epa.gov/smartway/transport/calculators/index.htm>

ADDITIONAL RESOURCES FOR CHAPTER 5:

Additional Resources on Carpooling:

Ten Tips for Successful Carpooling
<http://www.commuterpage.com/tentips.htm>

Additional Resources on Fuel Efficient Vehicles:

EPA's Green Vehicle Guide
<http://www.epa.gov/greenvehicle/>

Union of Concerned Scientists' Hybrid Center
<http://www.hybridcenter.org/>

Cost savings calculator
<http://www.fueleconomy.gov/feg/savemoney.shtml>

Hybrid Savings Calculator
<http://www.hybridcars.com/calculator/>

Additional Resources on Packaging:

EPA WasteWise resources for Transport Packaging Challenge

<http://www.epa.gov/epaoswer/non-hw/reduce/wstewise/targeted/challenge/tpres.htm>

Additional Resources on Transportation:

List of Available Natural Gas Vehicles and Engines at <http://www.cleanvehicle.org/Available-NGVs-and-Engines.pdf>

Environmental Defense – Tips for Cutting Emissions

<http://www.edf.org/page.cfm?tagID=1142>

SmartWay Homepage

<http://www.epa.gov/smartway/index.htm>

SmartWay Upgrade Kit – pdf

<http://www.epa.gov/smartway/documents/420f06016.pdf>

SmartWay – Fuel Options

<http://www.epa.gov/smartway/vehicles/smartway-fuels.htm>

SmartWay – Certified Vehicles

<http://www.epa.gov/smartway/vehicles/smartway-certified.htm>

SmartWay Transport

<http://www.epa.gov/smartway/transport/what-smartway/index.htm>

SmartWay Basic Info

<http://www.epa.gov/smartway/transport/basic-information/index.htm>

SmartWay Poster

<http://www.epa.gov/smartway/documents/epa-little-flower-poster.pdf>

SmartWay – Buy and Drive Smart

<http://www.epa.gov/smartway/vehicles/buy-and-drive-smart.htm>

SmartWay – Innovative Carrier Strategies

<http://www.epa.gov/smartway/transport/what-smartway/carrier-strategies.htm>

SmartWay – Innovative Shipper Strategies

<http://www.epa.gov/smartway/transport/what-smartway/shipper-strategies.htm>

SmartWay – Idle Reduction

<http://www.epa.gov/smartway/transport/what-smartway/idling-reduction.htm>

SmartWay Technologies Savings Calculator

<http://www.epa.gov/smartway/transport/calculators/index.htm>

SmartWay – Become a Partner!

<http://www.epa.gov/smartway/transport/become-partner/index.htm>

SmartWay Financing for New Trucks or for Retrofitting Existing Trucks
<http://www.epa.gov/smartway/transport/what-smartway/financing-truck-loans.htm>

SmartWay Upgrade Kits
<http://www.epa.gov/smartway/transport/what-smartway/upgrade-kits.htm>

SmartWay Interactive Map
http://epamap10.epa.gov/website/irim_v1.asp?map.x=204&map.y=196&lasttool=zoomin&tools=zoomin&cursorType=url%28graphics%2Fzoomin.cur%29&state=&arcdo=

Greenbiz – Telecommuting (brief)
<http://greenbiz.com/resources/resource/telecommuting>

business.gov – Telecommuting and Green Commuting
<http://www.business.gov/guides/environment/green-commuting.html>

Uship – Online shipping marketplace
<http://www.uship.com/>

¹ *IEA World Energy Outlook 2008*, <http://www.worldenergyoutlook.org>

² “Big Oil Projects Put in Jeopardy by Fall in Prices,” NY Times, December 16, 2008,
<http://www.nytimes.com/2008/12/16/business/16oil.html>

³ *Sustainable Energy Independence for NYC*, Sierra Club NYC, 2008, www.beyondoilnyc.org.

⁴ Conducted by Wayne Hochwarter

⁵ http://www.hrwebcafe.com/2008/05/survey_when_gas_goes_up_employ.html

⁶ http://www.usatoday.com/news/nation/2008-06-30-four-day_N.htm

⁷ <http://www.nytimes.com/2008/08/07/fashion/07Work.html?pagewanted=1&ref=style>

⁸ Ibid.

⁹ Ibid.

¹⁰ EPA Green Vehicle Guide - <http://www.epa.gov/greenvehicles/Index.do>

This comprehensive guide let's you compare vehicles by fuel economy. You can look up available vehicles in your state by the year, minimum MPG, fuel type, etc. You can also use
<http://www.fueleconomy.gov/feg/findacar.htm>

¹¹ <http://www.etrucker.com/apps/news/article.asp?id=45557>

¹² http://www.todaysfacilitymanager.com/tfm_08_02_sustainable.php

¹³ <http://greenbiz.com/column/2008/07/07/logistics-transportation-greener-supply-chain>

¹⁴ Ibid.

¹⁵ <http://news.van.fedex.com/node/7378>

¹⁶ <http://www.socialfunds.com/news/article.cgi/1138.html>

¹⁷ Department of Energy http://www.eere.energy.gov/afdc/progs/vehicles_search.php. Also visit
<http://www.eere.energy.gov/afdc/fuels/index.html> for information on alternative fuel delivery vehicles

¹⁸ <http://www.epa.gov/smartway/index.htm>

¹⁹ See <http://www.epa.gov/smartway/documents/420f06016.pdf>

²⁰ <http://www.environmentalleader.com/2006/11/28/new-smartway-loan-for-trucking-companies/> See
<http://www.epa.gov/smartway/transport/what-smartway/financing.htm> for more information on financing,
and submit an application to www.smartwayfinancecenter.com