



## Sustainability Initiatives in the City of St. Louis

Volume 2

**T**raditional vehicles tend to have significant impacts on the environment, accounting for between 20 and 25% of world energy consumption and carbon dioxide (CO<sub>2</sub>) emissions. The City of St. Louis has taken considerable steps to address the health and environmental issues presented by harmful vehicle emissions. Through telematics installations, diesel retrofits, hybrid purchases, and the use of alternative fuels like compressed natural gas (CNG), the City is reducing its environmental impact by reducing fuel consumption and limiting emissions. Through its No-Idling Ordinance, the City requires City staff and the public at large to be mindful of unnecessary emissions.

### Telematics

The City has undertaken an innovative project to install telematics devices on its public works fleet. Telematics is a groundbreaking combination of computer and communications technologies that tracks vehicle locations and the status of on-board equipment. The telematics devices monitor idling, speed, route and location. Through the use of telematics, the City has improved operational efficiency, reduced fuel consumption, curbed emissions, and improved air quality.

Fuel savings are accomplished by enabling vehicles to utilize more efficient routes and eliminating extraneous trips. Telematics installations are also used to monitor policy compliance, such as limiting unnecessary idling, which wastes fuel and creates harmful emissions. Telematics installations have reduced idling as much as 9 hours a week in some trucks with a fleet average of 2.5 hours per week. Reducing fuel consumption helps reduce costs and improve air quality and health conditions. Additional benefits of reduced fuel consumption include extending the life of vehicle engines. As of June 2011, 345 units have been installed and the number is expected to exceed 400 by the end of 2011.

### Diesel Retrofits

Diesel engines are reliable, fuel-efficient, high torque engines that are optimal for use in many of the City's heavy-duty trucks, buses, and nonroad vehicles. A disadvantage of diesel engines is that they emit significant amounts of particulate matter and nitrous oxides (NOx). They also emit toxic air pollutants which can adversely affect human health, contribute to acid rain, and contribute to ozone (smog). With the help of the American Lung Association and Grace Hill Settle-



ment House, the City of St. Louis has responded to the challenge of reducing air pollution from diesel engines. Engines were retrofitted with oxidation catalysts and particulate filters, which can reduce fuel usage and hydrocarbons and carbon monoxide emissions by up to 50%. All applicable diesel engines have been retrofitted by the City, including refuse, dump trucks, aerial trucks, fire apparatus, reserve ambulances and street sweepers.

### Hybrid and Electric Vehicles

Hybrids are vehicles with both an internal combustion engine and an electric motor designed to achieve better fuel economy. The City currently operates a small but promising fleet of hybrid vehicles, with one Toyota Prius and two Ford Escape hybrids and one International hybrid aerial truck. The aerial truck being used by the Forestry Division for tree trimming shows particular promise because it eliminates most of the diesel fuel used during idling periods of bucket operation.

The City is also collaborating with others in the region to explore the use of, and

# CITY FLEET AND SUSTAINABILITY





infrastructure needs associated with, electric vehicles. The City has promoted alternative modes of transportation, such as bicycles and public transit. Since 2009, the City has set aside 10 WeCar spaces annually, at a value of \$22,000. WeCar is a car sharing program that allows residents to rent hybrid cars at a reasonable hourly rate, providing flexibility options for people who choose to use public transit.

### Alternative Fuels

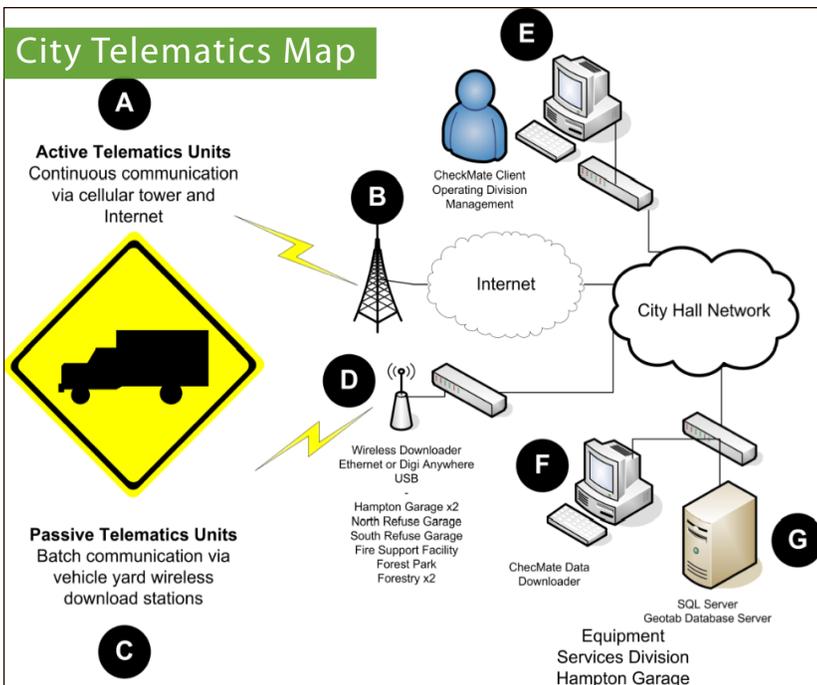
The City is a founding member of the St. Louis Clean Cities Coalition, an affiliate of the U.S. Department of Energy, and remains active within the organization. Clean Cities works with vehicle fleets, fuel providers, community leaders, and other stakeholders to reduce petroleum use in

transportation. The City has experimented with ethanol (E85), biodiesel (B20), and compressed natural gas as alternatives to petroleum fuel. Lambert Airport has initiated an impressive alternative vehicle fuel program. CNG fuels its shuttle buses and the majority of its fleet has been converted to run on CNG. While CNG does produce greenhouse gases and particulate matter, it is a more environmentally clean alternative to using conventional gas or diesel. The Airport also has 400 vehicles running on biodiesel.

### No-Idling Ordinance

An idling engine emits harmful tailpipe exhaust, exposing anyone nearby to air pol-

lutants thought to contribute to asthma and other health problems. In 2008, the City passed a No-Idling Ordinance that prohibits vehicle idling for longer than five minutes (10 minutes when temperatures dip below freezing). The ordinance has inspired an associated outreach and awareness campaign, especially with respect to idling in School Zones. The City is also partnering with local businesses to educate about the No-Idling Ordinance in the Downtown area.



### More Information:

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