

Supporting the work of mayors and other local government leaders through climate action tools, technical and communications assistance, and peer networking

Tried and True: Emission Reductions for Government Operations

**CCAR Annual Member's Meeting
Sacramento, CA
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Mission

Our mission is to build, serve and drive a movement of local governments to advance deep reductions in greenhouse gas emissions and achieve tangible improvements in local sustainability.



ICLEI - A Worldwide Movement of Local Governments

A dark blue world map with yellow city lights, serving as a background for the text.

11 Offices

68 Countries

6 Continents

- **Climate Change Mitigation**
- **Climate Adaptation / Resilience**
- **Sustainability Performance**

Categories of Emissions Data – 3 Sectors

1. Building, facilities and operations
2. Municipal vehicle fleet
3. Waste from local and government operations



Climate Air and Pollution Planning Assistant (CAPPA): A Decision Support Tool

- Multi-metric rating
- Scalable, customizable
- Thousands of measures
- Case studies
- Implementation guidance

ICLEI Emissions Reduction Decision Support Tool

Purchase of Hybrid/Electric Vehicle

Background Description:

In some cities, exhaust from cars and light trucks is the single biggest air polluter. Electric drivetrains are much more efficient than the drivetrains used on standard internal combustion engine vehicles and can significantly reduce particulate matter and greenhouse gases. Electric motors, rather than pistons and shafts, provide the necessary propulsion. Hybrid/electric vehicles couple and electric drive with a gasoline engine and are widely available and are suited for a variety of applications. Hybrid Ford Escapes are being used as taxi cabs in New York City and San Francisco. In 2006, Ford Motor Company pledged to make hybrid versions of half of their fleet. While Ford is unlikely to reach this goal, automakers are increasingly making hybrid/electric versions of existing models available. Many jurisdictions are now employing hybrid buses to reduce particulate emissions and save money on fuel.

EPA estimates that the Toyota Prius achieves gas mileage

Average Emissions Reductions :

Default values for emissions reductions are for converting one traditional gasoline engine to a hybrid engine, and savings 457 gallons of gasoline. To Calculate the effect of converting more vehicles to hybrids, see the calculator below.

CO₂: 9,811 pounds
NO_x: 30 pounds
SO_x: 2
CO: 318
VOC: 33
PM₁₀: 1

What Actions are Local Governments Taking?



Trip Reduction Programs



Car share programs have debuted across the country in the past few years and are now in over 70 cities.

Programs range from small non-profits like **Austin** CarShare and **Boulder** CarShare, to bigger companies like FlexCar and Zipcar, to various small car co-ops.

Telecommuting cuts down on vehicle miles traveled and helps to curb pollution from cars.

Sacramento County, CA provides cash incentives for establishing employee home-based telecommuting for businesses and local government agencies. Participating employers receive up to \$1,000 per new telecommuter with a maximum of \$5,000 per employer or agency. The cash incentives can be used for the purchase and/or installation of equipment at home or work to facilitate telecommuting.



Energy Efficiency

Ordinances shape municipal policy and provide guidelines for how to save energy.



In 2003 **Fort Collins, Colorado** adopted an aggressive renewable energy and energy efficiency policy for their municipal electric utility. EE goals are to reduce per capita electric consumption 10 percent and per capita peak day electric demand 15 percent by the year 2012. Renewable energy use is targeted to increase to 2 percent in 2004 and 15 percent by 2017.

Retrofits can help save on costs and dramatically reduce emissions.

The city coliseum in **Greensboro, NC** received energy-efficient lighting system retrofits, water conserving plumbing fixtures and major upgrades to its HVAC system. These measures will reduce electricity consumption by a quarter, cut natural gas use in half and cut emissions by more than 1,700 tons a year. The cost of these changes will be paid for by the net energy savings of the facility.

Alternative Fuel Vehicles



Biodiesel powers cars more cleanly than diesel by using plant oils and can be derived from many sources. The price of biodiesel is also less volatile than the price of diesel.

Keene, NH converted 77 public works vehicles, including fire engines and snowplows, reducing 12 tons of CO₂e annually.

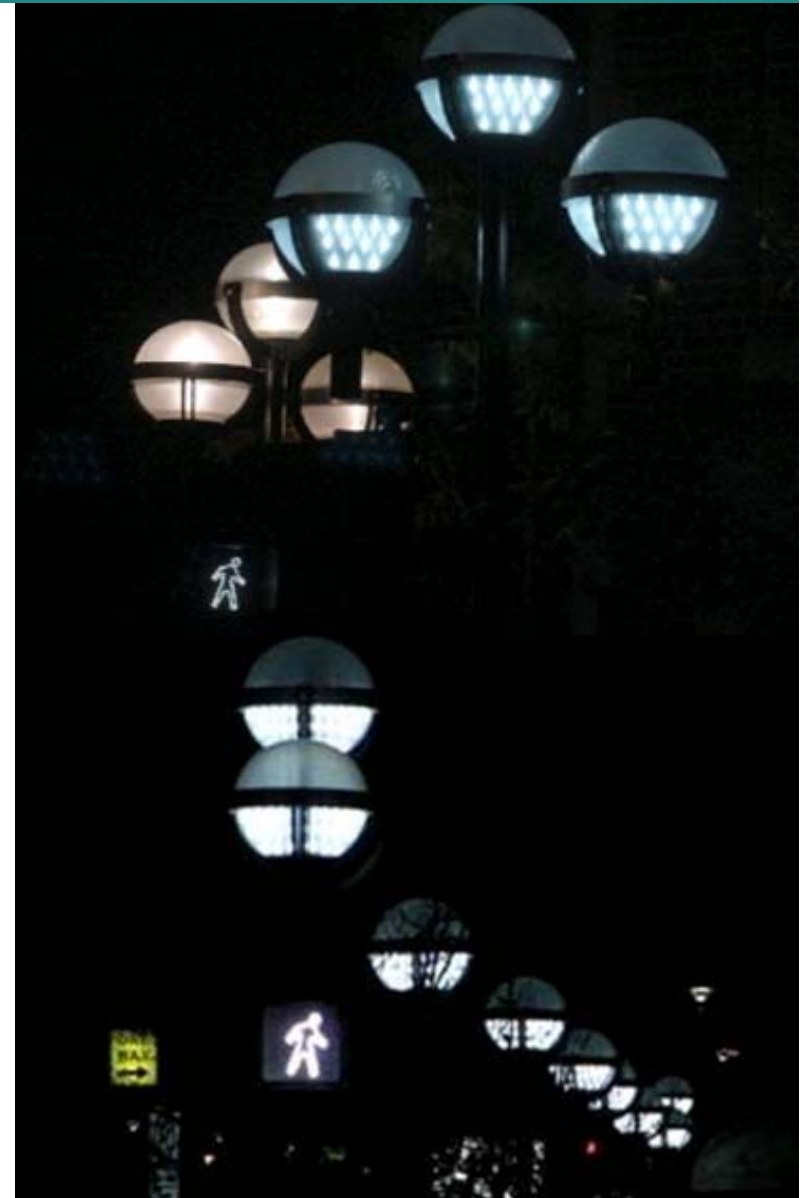
San Francisco, CA powers all of its 1500 diesel vehicles with biodiesel, including the ambulances and street sweepers.

Bonus points: At the close of 2007, San Francisco launched SFGreasecycle, a free program in which the city picks up used cooking oil and grease from local restaurants, hotels and other commercial food preparation establishments.

LED Street Lighting

Ann Arbor, MI

- Piloted LED pedestrian street lighting
- Installation throughout downtown
- ICLEI's 2007 Climate Innovation Invitational winning project
- Energy use reduced ~ 50%
- Maintenance costs reduced 70-80%
- 250 tons CO₂e saved annually



Fleet Car Sharing

Philadelphia, PA

- Partnership between the City and PhillyCarShare for local residents and government employees
- Replaced 330 municipal vehicles, saving the city \$2 million/year and reducing car use 40%
- Replaced 1,300 citizen vehicles, saving about \$5.5 million and 8.2 million fewer vehicle miles driven

Berkeley, CA

- Replaced 9 municipal vehicles with 5 City CarShare Priuses
- Saves an estimated 15 tons of CO₂e annually
- Reduced maintenance costs
- Improved employee satisfaction



Energy Efficiency Case Study

Oakland, CA

<u>Project</u>	<u>Cost Savings</u>	<u>Emissions Cut</u>
Energy Efficient Offices: City Administration Bldg.	\$180,000/ yr	750 tons/ yr
Energy Retrofits: Oakland Museum	\$160,000/ yr	500 tons of CO2e/ yr
Lighting: LED traffic lights	\$400,000/ yr	1,700 tons/ yr
PV array on an Oakland ice rink	City Administration Bldg.	Oakland City Museum

