U.S. Department of Energy

Tomorrow's Energy Today

for Cities and Counties

Beating the Traffic with Commuting Alternatives

By encouraging commuting options, local governments can help reduce air pollution, fuel consumption, and traffic congestion. Minimizing these problems makes the community more appealing to businesses, residents, and visitors and boosts the local economy.

In 1993, Madison, Wisconsin, launched a 3-year program to cut the number of cars on its streets through strategies such as ride sharing and preferential parking for high-occupancy vehicles. Madison recruited three major local employers to participate: American Family Insurance, CUNA Mutual Insurance Group, and the University of Wisconsin at Madison. As an extra inducement to the two private employers, participation in the program qualified their employees for 25% to 50% discounts on city bus passes.

The public-private partnership in Madison has recently resulted in more requests to the city for assistance in developing transportation demand management initiatives.

Morry Gash / PIX1107

"It's a partnership between government and the private sector in which the city acts as the coordinator," says Dan McCormick, the city's traffic engineer. "With these major employers in the lead, and given that it has been good for them and the community, other employers will take note." Although it is too early to have collected hard data showing results, McCormick says progress to date is modest, but represents a significant beginning.

Madison, Wisconsin, is one of many local governments now encouraging commuting alternatives to achieve cleaner air, less traffic, and more efficient services. These are the "quality-of-life" benefits that attract people to a community, promoting local economic growth, larger tax and job bases, and tourism.

Communities that don't encourage commuting options face increased traffic congestion. The economic impact of traffic congestion is substantial. When accounting for lost productivity, wasted gasoline, increased air pollution, and higher insurance premiums, the costs of congestion in the United States are at

"MetroLink has been a resounding success. . . We view it as a catalyst for economic growth, a way to relieve traffic congestion, and a way to contribute to clean air."

—Linda Hancock
Bi-State Development Agency
St. Louis, Missouri

least $43 billion, according to a research report published by the Texas Transportation Institute and the U.S. Department of Transportation.

Most traffic congestion is a result of work-related commuting: too many people driving cars within the same area at the same time. Local governments can reduce congestion by encouraging people to change how they commute, when they commute, and even where they work.

How People Commute

One of local government's most direct roles in promoting alternative transportation is to support mass transit, such as light rail systems and buses, bicycles, and ride sharing.

Light Rail Systems

Light rail systems are an increasingly popular form of alternative transportation. More than 30 cities are either considering or building new light rail systems. One of those cities, St. Louis, Missouri, opened the first 18 miles (29 kilometers) of its MetroLink light rail system in 1993. By October of 1994, the weekday ridership of 36,300 was three times the original projection.

"People like the system and use it to avoid traffic hassles," says Linda Hancock, of Bi-State Development Agency. "MetroLink has been a resounding success," continues Hancock, spokeswoman for the transit system operator. "It's a key entity in St. Louis' future. We view it as a catalyst for economic growth, a way to relieve traffic congestion, and a way to contribute to clean air."

Bus Systems

Bus systems are the backbone of the nation's mass transit system and a primary focus of local governments. For example, the Regional Transportation District (RTD), the public transportation system serving the six-county metropolitan Denver area in Colorado, promotes bus ridership with a photo ID "Eco Pass" that allows the bearer to ride RTD buses anywhere, any time. Employers provide them for their employees free or at a reduced rate. Cost to the employer ranges from $25 to $185 per employee per year, depending on the company's location, number of employees, and frequency of service in the area.

The City of Boulder annually provides the Eco Pass free to its employees. The City also encourages other employers to participate by reimbursing 25% of pass costs for the first year. Neighborhood groups can also buy a version of the pass known as the Residential Bus Pass for residents. In addition, businesses in Boulder's downtown area pay a special tax, and

Bi-State Development Agency

MetroLink, the St. Louis light rail system, has a ridership three times its original projection.

Vicki Kerr

Boulder City Councilmen Gary Myre (left) and Spence Havlick (right) chat before boarding a city bus. Bicycle transportation is easier and more practical than ever in Boulder, Colorado, where city buses are equipped with bicycle carriers.

Funding Sources You Should Know About

The Mobility Partners Project provides alternative transportation case studies from all over the country, information on transportation legislation and planning requirements, and information about how to get support for your alternative transportation projects. The project is a partnership between the U.S. Environmental Protection Agency and the nonprofit Surface Transportation Policy Project. For more information, call the Surface Transportation Policy Project at (202) 939-3470.

Contact your state office of the Federal Highway Administration to learn about two multibillion-dollar programs that can fund alternative transportation programs. One is the Congestion Mitigation and Air Quality Improvement Program, which funds projects that will reduce emissions. The other is the Surface Transportation Program, which funds alternative transportation strategies ranging from mass transit to telecommuting.

money from that tax is used to buy Eco Passes for all employees in the district. By early 1994, 22,600 Boulderites held Eco Passes. Boulder has a population of nearly 100,000. The city's goals include reducing single-occupancy vehicle trips by 15% by the year 2010.

Boulder also makes the option of using mass transit as easy and convenient as possible. For example, the city makes fleet vehicles and bicycles available for city business during the day to city employees who use alternative modes of transportation. The city has also addressed the fear that workers might miss their ride or have an emergency need to be home early. Rides are available, even in an emergency.

"When you buy an Eco Pass, it comes with a guaranteed ride home," says Andrea Robbins of GO Boulder. Robbins is marketing director of GO Boulder, the city's Alternative Transportation Center, which employs seven full-time and four part-time employees. "If you take any kind of alternative transportation and have an emergency, or maybe it rains and you can't ride your bike home, you call a taxi, show them your Eco Pass, and get a free ride home. Even with a stop at day care."

GO Boulder also started a new shuttle service, the HOP, in October 1994 after adding a $1,399,000 Intermodal Surface Transportation Efficiency Act grant to its $1,369,000 budget. The HOP, which uses eight propane-powered shuttles, connects the University of Colorado with the downtown area and the city's major shopping mall.

And GO Boulder's efforts have paid off. In 1993, ridership on RTD buses in Boulder increased nearly 14% over that of 1992.

GO Boulder also offers free training for Employee Transportation Coordinators, individuals designated at local companies to promote and provide information on alternative transportation options. Coordinators exist at about 100 local companies and institutions, representing more than 20,000 employees—close to one-third of Boulder's work force. GO Boulder meets with these people once a month and keeps them informed with a regular newsletter.

Bicycling—Not Just for Recreation

Bicycling and walking are also central elements in GO Boulder's program. Boulder has a full-time bicycle/pedestrian coordinator. Many traffic signals in the city respond to bicyclists via metal detectors in the pavement. The city has also prevailed on RTD to put bicycle carriers on Boulder city buses.

Palo Alto, California, is another city where bicycling is big. Many people who work in the City of Palo Alto commute by bicycle—hardly surprising, considering the city's commitment. "Our bikeway system has been in place for more than 20 years, and we have identified bicycling and programs to promote it in the city's comprehensive plan," says Gail Likens, senior planner in Palo Alto's Transportation Division.

This commuter benefits from Palo Alto's commitment to alternative forms of commuting. In addition to special lockers, showers, and parking spaces, bicyclists profit from bicycle detectors. City traffic signals respond to bicyclists via metal detectors in the pavement.

Austin Randall Photography/PIX1108

"With these major employers in the lead, and given that it has been good for them and the community, other employers will take note."

—Dan McCormick
Traffic Engineer
City of Madison, Wisconsin

Palo Alto's bicycle advisory committee regularly advises city staff and city council on traffic projects. The city's comprehensive plan includes "bicycle boulevards," streets on which bicycles have precedence over cars. In addition, ordinances require private developers to provide amenities for bicyclists. Developers of buildings as small as 10,000 square feet (930 square meters) must provide showers. Developers also must provide bicycle parking, generally at a ratio of one bicycle space for every 10 vehicle spaces.

Palo Alto also promotes bicycling in a variety of other ways. City employees using private bicycles for city business are reimbursed at $0.07 per mile, and they can use city-owned bicycles for commuting. By registering in the city's bicycle program, residents can receive a coupon good for a 20% discount on the purchase of a bicycle or 25% on bicycle accessories, and a brochure and maps for local bicycling. Registration in the city's bicycle/walker program also provides a monthly coupon redeemable at selected locations for merchandise useful in biking or walking.

In addition, Palo Alto provides bicycle parking racks on downtown sidewalks and bicycle lockers that can be rented at the local station of the commuter train between San Jose and San Francisco. Also, as in Boulder, traffic signals respond to bicyclists via sensors in the pavement.

Ride Sharing

Bicycles are not Palo Alto's only bow to alternative transportation, of course. The city encourages commuting alternatives through fliers enclosed in city utility bills. And, by ordinance, Palo Alto requires that every employer with 100 or more employees must have some sort of alternative commuting program, with a designated employee transportation coordinator. For its own employees, the city lists employees' home addresses by zip code to help them carpool and gives them a $20 voucher redeemable at local service stations if they carpool a minimum of 12 days per month.

Palo Alto also uses RIDES for Bay Area Commuters, Inc., a private nonprofit agency funded through the California Department of Transportation. RIDES helps people find fellow car poolers by maintaining a computerized data base, which at any time may contain 20,000 to 25,000 names. The agency handles some 40,000 to 50,000 ride-matching requests per year.

When People Commute

Does everyone have to crowd the roads at the same rush hour every day? Not necessarily. Palo Alto is one of many local governments that have altered commuting schedules by changing work schedules. Some city employees now work on a "4/10" schedule; they work 10-hour days Monday through Thursday and take Friday off. A larger number of Palo Alto's employees work on a "9/8" schedule; they work 9-hour days Monday through Thursday, and on Fridays, they either work an 8-hour day or take the day off.

Another way to avoid rush hour is flex time, in which a public entity or company staggers its workforce's shifts. King County, Washington, for example, has its full workforce in place only between 9 a.m. and 3 p.m. Shifts begin every half hour between 6:30 a.m. and 9:00 a.m. Traffic at off-peak hours is less, so employees get to work faster and save on fuel that would otherwise be burned in rush-hour crawl.

Bill Sandke

The Coronado Neighborhood Telecenter in Coronado, California, provides close-to-home telecommuting facilities for City of San Diego employees.

"People may not be able to work at home because of elderly parents, children, or lack of facilities."

—Kevin Ham
Coronado Neighborhood Telecenter
Coronado, California

Where People Work

More than 2 million Americans are already telecommuting—working away from the office—via telephone, fax, or modem, according to the U.S. Department of Transportation. By 2002, that number could be as high as 15 million, or 10.4% of the workforce.

San Diego, California, began its telecommuting program with 33 employees in 1991 and found that they telecommuted an average of 1.16 days per week, for an annual savings of 10,000 miles (16,090 kilometers) of commuting, 500 gallons (1892 liters) of fuel, and 400 pounds (182 kilograms) of atmospheric pollutants. By mid-1994, the city had 170 telecommuters and was anticipating a total of 600 within 2 years.

The city promotes telecommuting by sponsoring workshops and seminars, producing posters, and publishing a telecommuting newsletter and training manual. The city also works through the San Diego Telecommuting Association, which includes representatives from both government and the private sector.

Some employees telecommute via a "telecenter" in the city of Coronado, across the bay. The Coronado Neighborhood Telecenter is one of 12 telecenters being developed by the University of California–Davis under sponsorship from the California Department of Transportation. The telecenters are small offices equipped with telephones, faxes, computers, modems, photocopiers, and sometimes a receptionist.

But many employers are asking who's going to pay for telecenters—the users or their employers. One goal of the project is to answer that question, according to Kevin Ham, executive director of the Coronado telecenter.

"The idea of the telecenter is to provide an environment near the home, where individuals can work via telecommuting and come and go by local transit, biking, or walking," says Ham. "We find there's a need for telecenters in Southern California and many other parts of the United States and in Europe. Some people may not be able to work at home because of elderly parents, children, or lack of facilities. Telecenters provide them with the tools to do their job at a facility near their home."

Conclusion

Approaches to alternative transportation are as varied as the communities devising and using them. But the critical factor is initiative from local governments, often one of communities' largest employers. They can use and promote commuting alternatives among their employees.

Local governments can also promote alternative transportation among other employers and the general public. They can provide information on commuting options, improve the infrastructure, and use local authority to require and reward those changes necessary to make alternative transportation a widely accepted part of community life. Best of all, local governments can lead by example and establish a template for other employers to follow. ■

For More Information

World Resources Institute
P.O. Box 4852
Hampden Station
Baltimore, MD 21211-4854
(800) 822-0504
The Going Rate: What it Really Costs to Drive

Union of Concerned Scientists
2 Brattle Square
P.O. Box 9105
Cambridge, MA 02238-9105
(617) 547-5552
Steering a New Course: Transportation, Energy and the Environment

National Technical Information Service
(703) 487-4650
Transportation Implications of Telecommuting
The NTIS order number is PB93201119.

Energy, Emissions and Social Consequences of Telecommuting
The NTIS order number is DE94013377.

Urban Consortium Energy Task Force
Public Technology, Inc.
1301 Pennsylvania Avenue, NW
Washington, DC 20004
(202) 626-2400
The UCETF, which works extensively with local governments to document and help share their experiences, represents an excellent information and technical assistance resource. The UCETF publishes a vast array of reports on related topics.

EREC
P.O. Box 3048
Merrifield, VA 22116
(800) 363-3732
The Energy Efficiency and Renewable Energy Clearinghouse (EREC) is a service funded by the U.S. Department of Energy to provide information on renewable energy and energy efficiency technologies.

Contact the offices within the Federal Highway Administration to obtain information on the Intermodal Surface Transportation and Efficiency Act (ISTEA).

Federal Highway Administration:

Office of Environment and Planning
400 7th Street, SW
Washington, DC 20590
(202) 366-0233
Opportunities for Local Governments Under ISTEA

Office of Grants Management
400 7th Street, SW
Washington, DC 20590
(202) 366-6385
Flexible Funding Opportunities for Transportation Investment

Office of Technology Applications
400 7th Street, SW
Washington, DC 20590
(202) 366-6095
The FHWA provides selected fact sheets on ISTEA.

DOE Regional Support Offices

The DOE Office of Energy Efficiency and Renewable Energy reaches out to the states and private industry through a network of regional support offices. Contact your DOE regional support office for information on energy efficiency and renewable energy technologies.

Atlanta DOE Support Office
730 Peachtree Street NE, Suite 876
Atlanta, GA 30308
(404) 347-2837
(AL, FL, GA, KY, MS, NC, PR, SC, TN; Territory: VI)

Boston DOE Support Office
One Congress Street, 11th Floor
Boston, MA 02114
(617) 565-9700
(CT, MA, ME, NH, RI, VT)

Chicago DOE Support Office
One South Wacker Drive, Suite 2380
Chicago, IL 60606
(312) 353-6749
(IL, IN, MI, MN, OH, WI)

Dallas DOE Support Office
1420 West Mockingbird Lane, Suite 400
Dallas, TX 75247
(214) 767-7245
(AR, LA, NM, OK, TX)

Denver DOE Support Office
2801 Youngfield Street, Suite 380
Golden, CO 80401
(303) 231-5750
(CO, MT, ND, SD, UT, WY)

Kansas City DOE Support Office
911 Walnut Street, 14th Floor
Kansas City, MO 64106
(816) 426-4784
(IA, KS, MO, NE)

New York DOE Support Office
26 Federal Plaza, Room 3437
New York, NY 10278
(212) 264-1021
(NJ, NY)

Philadelphia DOE Support Office
1880 JFK Boulevard, Suite 501
Philadelphia, PA 19103
(215) 656-6950
(DC, DE, MD, PA, VA, WV)

San Francisco DOE Support Office
1301 Clay Street, Room 1060 North
Oakland, CA 94612
(510) 637-1960
(AZ, CA, HI, NV;
Territories: AS, CM, GU, RP)

Seattle DOE Support Office
800 Fifth Avenue, Suite 3950
Seattle, WA 98104
(206) 553-1004
(AK, ID, OR, WA)

This document was produced for the U.S. Department of Energy (DOE) by the National Renewable Energy Laboratory, a DOE national laboratory. The document was produced by the Technical Information Program, under the DOE Office of Energy Efficiency and Renewable Energy.

DOE/GO-10095-171
DE94006858
May 1995

Printed with a renewable-source ink on paper containing at least 50% wastepaper, including 20% postconsumer waste