At AC Transit, we continually work to improve the quality of public transit and the health of the environment in the communities we serve.

We recognize that one of the biggest contributors to global warming is the combined effect of millions of cars and trucks traveling our roads each day. The fundamental challenge is to reduce regional Vehicle Miles Traveled (VMT) by getting people out of their private cars and into alternative modes of transportation, reversing trends that go back decades. Efficient public transit is a critical part of the solution.

While we are beginning to work with developers, local governments, and public agencies to reduce regional VMT, we continue to examine our own environmental impacts, from the way we manage our wastes to our ongoing efforts to reduce particulates and other emissions. To reduce our dependence on diesel, we continue to develop hybrid buses and zero-emission fuel cell technology. Our fuel cell demonstration program has been attracting global attention as it surpasses all expectations — achieving between 150% and 200% the energy efficiency of diesel. We are also testing alternative fuels that produce fewer emissions and smaller carbon footprints. In recognition of our commitment to annual public reporting of our greenhouse gas (GHG) emissions, the California Registry recently named us a “Climate Action Leader.”

Increasingly, we are incorporating environmental programs into our strategic plans, and we are fostering environmental stewardship by educating and training our employees to use efficient, environmentally conscious practices. We are seeking improvements to the way we engage with our stakeholders, so that we address and prioritize the issues that matter most.

Through it all, we must not lose sight of our vision to provide a truly world-class transit service that is convenient, reliable and safe; a service that increases mobility, enhances the quality of life, and improves the health of the environment throughout the communities we serve.

I invite you to follow our progress by taking a closer look at this report, to see what we are doing to keep AC Transit at the forefront of environmental leadership.

Sincerely,

Rick Fernandez
General Manager, AC Transit
According to a recent report by the California Air Resources Board (CARB), the transportation sector is the biggest contributor to statewide greenhouse gas emissions, representing roughly 38% of the total emissions that cause global warming. Transportation’s share of the emissions pie has been increasing as California’s population increases, urban boundaries expand, and workers move farther from their places of employment.

AC Transit’s Role

When it comes to reducing greenhouse gas emissions from transportation, there are three basic options: reduce the carbon intensity of fuels, improve efficiency, or reduce overall vehicle miles traveled (VMT). AC Transit is doing all three:

Reducing Carbon. Our Clean Fuels Test Program has been evaluating the performance of biofuels, which have the potential to reduce our fuel carbon impact. Since 2006, we have been operating three zero-emission hydrogen fuel cell buses and we have nine more planned for future service.

Improving Efficiency. We are testing and using hybrid engine and fuel cell technology to improve fuel efficiency.

Reducing Vehicle Miles Traveled. AC Transit continues to promote public transit to increase ridership and reduce traffic congestion through programs like Bus Rapid Transit (BRT) and Rapid Bus, which are designed to increase the speed and frequency of the service we offer.

Transit-oriented Planning and Design

Compact, transit-oriented, pedestrian-friendly development can significantly reduce regional vehicle miles traveled, thereby reducing both regional pollution and global warming. The AC Transit Board recently updated our Guiding Principles to support smart growth. We continue to promote and distribute our manual on transit-friendly community design—Designing With Transit—in meetings with local elected and appointed officials. We participate in planning for creation or expansion of “transit villages” at numerous East Bay BART stations including Richmond, Macarthur, and Union City. In San Leandro, we participated in the city’s award-winning transit-oriented development strategy for the Downtown area.
Rapid Bus & Bus Rapid Transit

Rapid Bus service incorporates wider stop spacing, low floor buses, and signal priority to improve speed and reliability—and encourage transit-oriented development. Our survey of recent and planned development along the San Pablo corridor revealed some 60 projects, most of which included housing, that were initiated since Rapid Bus line 72R began service there in 2003.

Like Rapid Bus, Bus Rapid Transit (BRT) spaces bus stops farther apart, uses signal priority, and generally uses low floor buses. Additionally, BRT operates on separate rights of way, such as dedicated lanes, to allow the buses to be faster and more reliable. AC Transit is currently seeking input regarding a proposed BRT system to serve the cities of Berkeley, Oakland and San Leandro. This service would operate along Telegraph Avenue, International Boulevard and the East 14th Street corridors.

Transit Passes

AC Transit, along with Golden Gate Transit, has been a leader in implementing TransLink®, a “smart card” that speeds up boarding and eliminates the need for exact change and paper transfers. Use of TransLink expanded dramatically since October 2007 when we began offering cardholders discounted fares. In 2009, TransLink is expected to be operational on BART, Caltrain, and Muni. By 2010, the program should be greatly expanded to include most Bay Area transit systems. Further, AC Transit is participating in a regional program known as “TransLink for TOD,” intended to introduce residents of new Transit-Oriented Developments to public transit.

We continue to promote the City of Berkeley Eco Pass established for that city’s 1,400 employees, and the Class Pass and Bear Pass programs for UC Berkeley students, faculty and staff. Meanwhile, we are examining the potential for creating a similar pass for members of the Peralta Community College District.

ENVIRONMENTAL INITIATIVES

AC Transit’s commitment to the environment goes beyond helping our riders get out of their private cars and onto public transit. We have also launched a number of leading edge initiatives aimed at reducing our own environmental impact.

Clean Fuels Test Program

On October 23, 2007, AC Transit and Chevron Products Company launched the Cleaner Fuels Test Program. The program was developed to study the performance of two alternative fuels, a biodiesel fuel blend (B20) and gas-to-liquid (GTI) diesel, derived from natural gas. Both B20 and GTI diesel are potentially environmentally friendly alternatives to the diesel fuel currently used by AC Transit.

Taking the HyRoad

In 2000, AC Transit launched a hydrogen fuel cell demonstration program called the HyRoad. The HyRoad has since become the most comprehensive program of its kind in North America. So far, the buses have surpassed expectations regarding fuel economy, delivering more than 50% greater energy efficiency than diesel. As of December 2007, the three demonstration buses had logged a total of 68,098 miles, effectively saving 16,175 gallons of diesel and 184,000 pounds (84 metric tons) of CO2 emissions.

Hybrids

We continue to develop our hybrid engine program, which began in 2006 with a grant from the Bay Area Air Quality Management District. In partnership with Van Hool, we developed a gasoline hybrid-electric 30-foot neighborhood bus that uses nickel metal hydride batteries to capture energy from braking for use in acceleration and propelling vehicles up hills. The prototype is scheduled to undergo road tests in 2009 to evaluate fuel and vehicle performance. Upon the completion of the tests, we expect to order up to nine additional gasoline hybrids or to explore diesel hybrid technology as an alternative.

NextBus

AC Transit provides real time bus arrival information on both the 1R and 72R Rapid routes, and at several BART stations. The system enables riders to predict bus arrivals via signage at bus shelters as well as over the Internet.
Solar Power
In 2006, we entered into a partnership with Sunpower, PG&E and MMA Renewable Ventures, to install 2,728 photovoltaic panels on seven rooftops at two of our facilities (Hayward and East Oakland). The system is designed to generate 775,000 kilowatt hours of emission-free electricity per year, with an expected doubling of our solar capacity in 2009. Currently in the planning stage is a next generation hydrogen fueling station at our Emeryville facility that will use 1.6 mW of solar power and an electrolysis system to produce hydrogen. The public will have access to this station to fuel their private hydrogen-fueled vehicles.

Reducing – Reusing – Recycling
In 2000, AC Transit’s Recycling Committee began recycling of office waste including paper, cardboard, bottles, cans, ink cartridges, household batteries, e-waste (computer peripherals) and even eyeglasses at the General Offices. By 2007, the Recycling Committee had worked to expand these programs to all of AC Transit’s division offices, and now include electronic equipment, graffiti shields, scrap metal, and wood pallets.

Since early 2006, we have recycled more than 100 tons of office paper, cardboard, and aluminum cans. More than 12 tons of this material was recycled in just one month when the General Offices in Oakland was renovated in 2006. Overall refuse pickups at the General Offices and at some divisions have been reduced by as much as one-third, resulting in significant cost savings.

Environmental Performance
AC Transit’s operations result in several direct environmental benefits, including reductions in traffic congestion, total air pollutants, and consumption of fossil fuels. Our impacts, however, are significant due to the nature of our operations, particularly when it comes to fuel and energy use.

Fuel and Energy Usage
The use of diesel fuel to power our bus fleet represents our largest consumption of energy. We also use gasoline (for non-revenue vehicles) and consume natural gas and electricity to meet the heating, cooling, lighting, and mechanical needs of our offices and bus yards.

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Our annual consumption of natural gas increased by 8% from 2006 to 2007. One factor contributing to the increases at D4 was the launch of the HyRoad program – which produces hydrogen from natural gas – in 2006, and the expansion of that program in 2007 when service was extended from 8 hours per day, 5 days per week to between 12 and 16 hours per day, seven days per week.
We Want To Hear From You

We welcome feedback on this report. Feedback helps provide us with a better understanding of the issues important to our stakeholders and help us strive toward continuous improvement in our environmental performance. Please direct your comments, concerns, and questions to the following address:

Environmental Report Department
AC Transit
1600 Franklin Street
Oakland, CA 94612
sustainabilityreport@actransit.org

Water Use

Water use spiked in 2005 and has since been reduced to below 2004 levels. Bus washing contributes the most to our water consumption. We have found that proper operation and maintenance of our bus washing systems, where grey water from the wash cycle is collected and recycled, is critical to controlling water consumption. At the CMF we reduced water consumption by eliminating outdoor vehicle washing and by stopping the use of garden hoses to wash vehicles inside the steam bay. We are having mixed success reducing water consumption at the facility level. In 2007, significant reductions were achieved at Divisions 3 and 6, while increases were observed at Divisions 2 and 4.

Greenhouse Gas Emissions

AC Transit recognizes human-induced climate change as a major environmental challenge. In 2005, we were the first transit agency in the state to join the California Climate Action Registry and commit to annual public reporting of our greenhouse gas (GHG) emissions. The California Registry named us a “Climate Action Leader” after our 2007 GHG emissions inventory was independently verified.

By far, the largest contributor to our GHG footprint is the carbon dioxide (CO₂) emissions from fleet diesel usage. Smaller contributors include emissions from fleet gasoline usage and indirect emissions from imported electricity and natural gas.

Other Emissions

AC Transit has dramatically reduced its particulate matter (PM) and smog-forming oxides of nitrogen (NOₓ) emissions over the past few years, largely due to the adoption of newer engines, improved exhaust-control technologies, and the availability of cleaner-burning diesel fuels. As even newer engines become available, our emissions should continue to decline.

“I try to do whatever I can. And I try to teach others to do whatever they can.”
— Gerald Young, Maintenance

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This report is based on data reported and certified in 2007.