



Public Transportation Use Substantially Reduces Greenhouse Gases, According to New Study

News Release - September 26, 2007

http://www.apta.com/media/releases/070926_climate_report.cfm

WASHINGTON, DC –The most powerful weapon you can use to combat global climate change may be a daily transit pass, according to a new study that was released today by the American Public Transportation Association (APTA). The study, *Public Transportation's Contribution to U.S. Greenhouse Gas Reduction*, was prepared for APTA by Science Applications International Corporation.

The research shows that when compared to other household actions that limit carbon dioxide (CO₂), taking public transportation can be more than ten times greater in reducing this harmful greenhouse gas. It takes one solo commuter of a household to switch their daily driving to using public transportation and he or she can reduce their household carbon footprint by 10 percent. If one household's driver gives up that second car and switches to public transit, a household can reduce its carbon emissions up to 30 percent.

"Encouraging use and expanding public transportation should be a part of our national strategy to address global climate change," said James L. Oberstar, U.S. Congress (D-MN), chairman, House Transportation and Infrastructure Committee. "The report provides further evidence that public transportation is one of the most important tools to minimize carbon output, help the environment and assist the nation in achieving a sustainable transportation system."

"Congress has yet to have a serious, comprehensive debate about how to reduce greenhouse gas emissions and mitigate the impacts of climate change," said Peter DeFazio, U.S. Congress (D-OR), subcommittee chairman, House Transportation and Infrastructure Committee. "As the APTA report shows, however, increasing use of public transportation will be central to the discussion about how to reduce emissions from the transportation sector, which is something that I will pursue as Chairman of the Subcommittee on Highways and Transit."

While it is very important to employ environmentally friendly household activities, commuting by public transportation makes a more substantial impact. An individual switching to public transit can reduce their daily carbon emissions by 20 pounds; that's more than 4,800 pounds in a year. This is far greater than the many actions people are being encouraged to take, for instance;

- Home weatherizing and adjusting the thermostat for heating and cooling saves 2,847 pounds of carbon per year. Transit use saves almost twice the carbon.
- Replacing five incandescent bulbs to lower wattage compact fluorescent lamps saves 445 pounds of CO₂ per year. Transit use saves more than ten times the CO₂.
- Replacing an older refrigerator freezer with a high efficient one saves 335 pounds of CO₂ per year. Taking public transportation saves more than fourteen times the carbon.

"Public transportation use should be at the top of the list of ways for households to become greener," said William W. Millar, president of the American Public Transportation Association (APTA). "Switching to public transit gives a person the opportunity to immediately become part of the solution to help reduce carbon dioxide, a harmful greenhouse gas.

"Commuting by public transportation is one of the most significant actions a household member can take to reduce their carbon footprint," Millar added.

The research points out that due to increases in vehicle miles traveled, the problem of pollution from vehicle emissions is accelerating. Greenhouse gas emissions from mobile sources have grown 27 percent from 1990 to 2004. Autos and light duty trucks represent about 61 percent of the total mobile source of greenhouse gas emissions. The report says single occupancy drivers switching their work commute to public transportation is one of the more effective ways to reduce the nation's vehicle miles traveled while reducing harmful carbon dioxide.

"While it is good public policy to require more fuel efficient automobiles, increasing the use of transit can have a more immediate impact on our nation's transportation fuel consumption," said Millar. "It could take twenty to thirty years to see a complete turnover of the vehicle fleet. A household does not need to go to the expense of buying a new vehicle to make a difference; they can simply take advantage of the nation's existing bus or rail services to dramatically reduce their carbon footprint."

APTA is calling on Congress to incorporate public transportation into a national climate strategy that includes providing additional funding levels for more public transportation investment; providing tax credits to major employers who spend resources to support mass transit ridership programs; and tax credits to developers for mixed development residential, commercial and transportation sites that encourage greater use of public transportation.



Higher ozone levels from renewable fuels

The Renewable Fuels Standard combined with a rule relaxing requirements on producer emissions will lead to increased ozone levels, particularly in Midwestern states.

Policy News - May 16, 2007

http://pubs.acs.org/subscribe/journals/esthag-w/2007/may/policy/cc_highozone.html

The Bush Administration touts its new Renewable Fuels Standard (RFS) to increase ethanol and other biofuels in gasoline as a step toward oil independence, clean air, and lower greenhouse-gas emissions. Yet the U.S. EPA's own analysis reveals that an increase in corn-based ethanol will raise levels of ozone in certain Midwestern states, even as research points toward more premature deaths when ozone levels are high.

Farmers and other Midwesterners are likely to see decreased air quality.

Unveiled on April 10, RFS is a set of new EPA regulations designed to push up the amount of ethanol or other renewable fuels used in cars from today's 4.7 billion gallons per year (gal/yr) to 7.5 billion gal/yr by 2012. Almost all U.S. ethanol is produced from corn, the U.S. Department of Agriculture says, and by 2030, refineries will generate 14.6 billion gal/yr (or 8% of gasoline), the U.S. Energy Information Agency reports.

RFS will cut petroleum use by as much as 3.9 billion gal/yr by 2012, EPA Administrator Stephen Johnson says. Annual greenhouse-gas emissions will drop by up to 13.1 million metric tons [only .8 - 1.6%] by 2012; EPA says this is the equivalent of taking 2.3 million cars off the roads, or of cutting [only] about 0.4–0.6% of the anticipated greenhouse-gas emissions from U.S. cars by 2012.

The program implements a provision approved by Congress in the Energy Policy Act of 2005 and is part of a larger initiative by the Bush Administration to increase the use of biofuels.

Bill Becker, director of the National Association of Clean Air Agencies, criticizes the rule, noting that EPA's own analysis shows that the production and use of ethanol will **increase** emissions of nitrogen oxides (NOx) by 6–7% and of volatile organic compounds (VOCs) by 4–5%. Companies in approximately 120 counties, most in Midwestern states, will be expanding ethanol plants or building new ones, EPA writes. People in Arkansas, Ohio, Indiana, Illinois, and the southern states of Louisiana and Alabama will see the biggest ozone increases, but the air-quality impact will be "minimal", Johnson says, because many counties in these states already meet EPA standards for ozone. [Not in Ohio - there are 35 counties, including Franklin, that don't: http://www.relocalize.net/files/Ohiocounties_airpollution.pdf] Other Clean Air Act provisions will do their job to keep a lid on emissions of VOCs and NOx, adds Jennifer Wood, EPA's spokesperson.

But Americans are currently suffering from high ozone levels, according to the American Lung Association (ALA). In a new report, ALA notes that ozone levels across the country have decreased significantly since 2006, because of cooler summers and the installation of pollution-control equipment. Still, one-third of the population lives in areas with unhealthy levels of ozone. Created by a mixture of NOx and VOCs zapped by sunlight, smog exacerbates asthma and can lead to premature death from heart failure or lung disease. "The good news is that there's less ozone everywhere. Yet the science shows that millions are still at risk from ozone that exceeds acceptable levels," says Terri Weaver, ALA chair. Citing research commissioned by EPA, ALA shows that three groups of scientists, working independently to review all the research, found a "robust association" between daily ozone exposure and premature death (Am. J. Epidemiol. 2006, 163, 579–588).

Low-ethanol blends (E5.7 and E10) increase smog levels because the ethanol raises the vapor pressure of the fuel, so more VOCs evaporate into the air. Fuels like E5.7 and E10 also boost the fuel-oxygen content of the gas, creating an air-rich fuel that, when combusted in a regular engine, results in higher levels of NOx. Although environmental groups such as the Natural Resources Defense Council support high-ethanol blends (E85), recent ES&T research indicates that these could lead to more health problems in places like Los Angeles that already have poor air quality.

The air quality in Midwestern states will not be helped by a separate EPA rule that increases the amount of pollution that ethanol production plants can emit. The rule, released on April 12, raises the "threshold" of ambient air pollution—such as NOx, carbon monoxide, and sulfur—for these facilities from 100 to 250 t/yr. This means that new or expanding plants responding to the surging ethanol demand won't have to install pollution-control equipment if their emissions don't exceed the threshold. The producers won't have to control emissions from leaks or evaporative processes either, the rule states. Several ethanol plants were cited in 2002 for uncontrolled emissions of VOCs, including the carcinogens formaldehyde and acetaldehyde.

Becker and other state regulators aren't optimistic. President Bush asked Congress to cut \$35 million from EPA's clean-air budget that is set aside for state grants, Becker says. The increases in VOCs and NOx will only thwart states' efforts to keep the air clean, he adds.

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