

Resources

Ann Arbor Area Clean Cities Coalition

www.aacleancities.org

All the information and assistance offered by the Ann Arbor Area Clean Cities (AACC) program comes together in this online resource. AACC promotes alternative fuels and infrastructure, and advanced technology vehicles and practices. The AACC web site describes the program in detail and tells you how you can become involved. The site includes a listing of local alternative fueling stations, web resources, what's new locally, and much more!

Alternative Fuels Data Center (AFDC)

www.afdc.doe.gov

An ever-growing resource of information related to alternative fuels and advanced technology vehicles, the AFDC is widely used by government, industry, and private individuals. You can search the online document database by concept, keyword, or title. Over 3,500 publicly accessible documents are stored in the AFDC. Additionally, its search function locates other alternative fuel related sites and documents that don't reside on the AFDC. The AFDC website has a Station Locator that lets you select a fuel type, then find refueling stations within the radius that you choose. Using the Route Mapper, you can enter the start and end points of a cross-town or cross-country trip, then locate stations along the way.

Clean Cities / AFDC Hotline

1-800-CCITIES or ccities@nrel.gov

To ask specific questions or to learn more about alternative fuels and the Clean Cities program, you can call or email this free hotline. Its trained experts respond to thousands of inquiries every year. All the fact sheets, brochures, technical papers, and publications available in the AFDC can be ordered from the hotline and mailed free of charge. It's a great source of contacts, with the names, addresses, and phone numbers of other professionals who can answer your questions in greater depth.



Ann Arbor Area Clean Cities Coalition
100 N. Fifth Avenue, 4th Floor
Ann Arbor, MI 48107-8647
info@aacleancities.org
www.aacleancities.org

You're going
to change
the world the
next time
you drive.



Why not
change it for
the better...

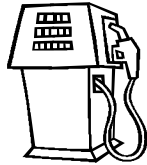
Using Clean Cities Technologies

Overview

The mission of the Clean Cities program is to advance the nation's economic, environmental, and energy security by supporting local decisions that contribute to the reduction of petroleum consumption. The Ann Arbor Area Clean Cities Coalition is one of more than 80 coalitions in the U.S. that carries out this mission by developing public/private partnerships to promote alternative fuels and vehicles, fuel blends, fuel economy, idle reduction, and hybrid electric vehicles.

Alternative Fuels & Vehicles

Alternative fuels, as defined by the Energy Policy Act of 1992 (EPAct), include ethanol, natural gas, propane, hydrogen, biodiesel, electricity, and methanol. These fuels are being used worldwide in a variety of vehicle applications. Using these alternative fuels in vehicles can generally reduce harmful pollutants and exhaust emissions. In addition, most of these fuels can be domestically produced and derived from renewable sources.



Alternative fuel vehicles (AFVs), as defined by EPAct, include any dedicated, flexible-fuel, or dual-fuel vehicle designed to operate on at least one alternative fuel. Alternative fuel vehicles come in a variety of vehicle models, such as sedans, pickup trucks, sport utility vehicles, vans, shuttle buses, medium-duty vehicles (such as delivery trucks), heavy-duty buses, and heavy-duty trucks. AFVs can easily be used in consumer or fleet applications.

Fuel Blends

Blending alternative fuels with conventional fuels is an important option for reducing petroleum use and an important strategy in the Clean Cities portfolio. Examples of commonly used blends include E10 (10% ethanol/90% gasoline) and B20 (20% biodiesel/80% diesel). Blends can also consist of two types of alternative fuels, such as hydrogen and compressed natural gas (HCNG), which might be a

combination of 20% hydrogen and 80% compressed natural gas. Many coalition stakeholders use blended fuels in their fleets and blended fuels are widely available locally at public fueling sites.

Fuel Economy

The U.S. consumes nearly 20 million barrels of petroleum per day and is dependent upon other countries for over half of the petroleum it uses. More than half of that petroleum is used to power the quarter billion vehicles operating on the nation's highways. Improving the fuel economy of the automobiles we drive can reduce the amount of petroleum we use, making our country less dependent upon foreign oil, helping the environment, and saving us money each time we go to the pump. The U.S. EPA has noted that even a modest 3 mpg increase in vehicle fuel economy would save 1 million barrels of oil per day, save consumers as much as \$25 billion per year in fuel costs, and cut carbon dioxide emissions by 140 million tons per year.



Clean Cities is committed to reducing petroleum consumption by raising public awareness of the importance of vehicle fuel economy and helping consumers improve their gas mileage. The program supplies information to various target audiences through outreach channels, such as the internet, print-based publications, and broadcast media. Clean Cities also supports the excellent resource: www.fueleconomy.gov.

Idle Reduction

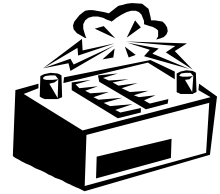
Each year, U.S. trucks and buses consume more than 800 million gallons of diesel fuel—without even moving. Truck and bus operators idle their engines while they rest for a variety of reasons, including heating or cooling, preventing start-up problems, or to operate electrical



equipment. Conserving diesel fuel that would otherwise be idled away represents an opportunity to reduce petroleum consumption, air pollution, and noise. Many states and municipalities have enacted laws to reduce idling, but the fact remains that truck and bus operators need to stay comfortable in their vehicles. The Clean Cities program works to educate truck/bus operators and others in the industry about idle reduction opportunities.

Hybrid Electric Vehicles

Hybrid electric vehicles (HEVs) are offered by numerous auto manufacturers and are becoming increasingly more available. HEVs typically combine the internal combustion engine of a conventional vehicle with the battery and electric motor of an electric vehicle. The combination offers low emissions, with the power, range, and convenient fueling of conventional (gasoline and diesel) vehicles, and they never need to be plugged in. The inherent flexibility of HEVs makes them well suited for fleet and personal transportation.



HEV emissions vary depending on the vehicle and its configuration. But in general, HEVs have lower emissions than conventional vehicles because an electric motor is used with an internal combustion engine, which offsets how often the engine is used and, therefore, reduces fuel use and emissions. In addition, HEVs have the potential to operate in "electric only" mode. In this mode, the vehicle can operate with no emissions, which is optimal in congested areas and in areas where emissions are not tolerated.

HEVs can go 40-70 miles per gallon of gasoline. Because HEVs are so efficient and have high fuel economy, less fuel is used than conventional vehicles. In addition, HEVs have the potential of running on alternative fuels, which can be renewable and/or produced in the United States. HEVs can reduce U.S. dependence on fossil fuels and decrease foreign oil imports.