Goals, Strategies, and Top Accomplishments

Clean Cities is the U.S. Department of Energy's (DOE) flagship transportation deployment program. Formed in 1993 under the Energy Policy Act (EPAct) of 1992, the mission of this voluntary initiative is to reduce U.S. petroleum consumption through the use of alternative fuels and vehicles, hybrid electric vehicles, fuel blends, increased fuel economy, and idle reduction measures. To this end, Clean Cities partners with state and local organizations to promote the use of these petroleum-reduction technologies and methods. Clean Cities also supports EPAct-regulated state and alternative fuel provider fleets, which are required to purchase alternative fuel vehicles (AFVs) each year.

Clean Cities' foundation is built on forming partnerships with stakeholders in its nearly 90 Clean Cities coalitions throughout the United States. These partners include fuel suppliers and distributors, vehicle manufacturers and marketers, national laboratories, state and local governments, and other federal agencies.

Clean Cities is based on the concept that federal support can empower local citizens and organizations to become the leaders of a national movement for change. The resulting partnerships have inspired thousands of innovative, committed stakeholders to exceed all expectations in guiding their communities toward effective transportation solutions.

Goals and Strategies

Clean Cities' primary goal is to reduce U.S. petroleum use by 2.5 billion gallons per year by 2020. To achieve this overall goal, Clean Cities identified three petroleum-reduction strategies:

- Replace petroleum with nonpetroleum-based alternative fuels and blends
- Reduce petroleum consumption by promoting smarter driving practices, idle reduction, and the use of more fuel-efficient vehicles and advanced technologies
- Eliminate petroleum use by encouraging the use of mass transit, trip elimination measures, and other congestion mitigation approaches

Clean Cities coalitions across the nation are pursuing these strategies through local efforts to build alternative fuel infrastructure, help school districts transition buses to run on biodiesel blends, work with truck stop owners to install idle reduction equipment, and implement citywide incentive programs to encourage the use of subways and other public transportation. In addition, Clean Cities is pursuing the following three initiatives designed to help U.S. drivers adopt petroleum-reduction fuels and technologies.

Pearson Fuels/PIX16745

In a continuing effort to reduce petroleum consumption, Clean Cities is working with industry partners to build reliable alternative fueling infrastructure.

Goals

Clean Cities plans to reduce U.S. petroleum use by 2.5 billion gallons per year by 2020 by:

- **Building** reliable alternative fueling infrastructure in at least 15 major geographic areas
- **Partnering** with at least 15 of the largest U.S. vehicle fleets to help them reduce petroleum use
- **Developing** at least 10 major interstate alternative fuel infrastructure corridors

Strategies

Clean Cities plans to meet these goals by:

- **Replacing** petroleum with nonpetroleum-based alternative fuels and blends
- **Reducing** petroleum consumption by promoting smart driving practices and vehicle technologies
- **Eliminating** petroleum use by encouraging mass transit use and other approaches

Clean Cities
U.S. Department of Energy

Mayor Michael Bloomberg speaks at the New York City Clean Cities coalition designation ceremony.

New York City Department of Transportation/PIX 12494

Develop Regional Fueling Infrastructure

DOE is working with industry partners to build reliable alternative fueling infrastructure in at least 15 major geographic areas throughout the country by 2015. Clean Cities' strategy is to develop alternative fuel and advanced technology vehicle markets by leveraging funding through partnerships and placing infrastructure in regions with high densities of AFVs.

Develop Partnerships with Major National Fleets

DOE will form national partnerships with at least 15 of the largest U.S. vehicle fleets by 2015 in order to help them substantially reduce their petroleum use. To pursue this strategy, Clean Cities will use local and national education as well as outreach events to train the major fleets on the benefits of using alternative fuel and advanced technology vehicles.

Develop Infrastructure Corridors

DOE will expand its efforts with industry partners to develop at least 10 major interstate alternative fuel infrastructure corridors by 2020. Clean Cities will generate mapping capabilities of major transportation routes, form industry-government partnerships, and provide cost-share funding mechanisms to develop infrastructure so that fleets and individual consumers can drive coast-to-coast on alternative fuels.

Top Accomplishments

Displaced 2.4 Billion Gallons of Petroleum

Clean Cities coalitions have reduced petroleum consumption by more than 2.4 billion gasoline gallon equivalents (GGE) since 1993 through alternative fuel use and other petroleum reduction strategies. Annual petroleum displacement increased from 15 million GGE in 1994 to 412 million GGE this past year—an impressive 28% average annual growth rate. At the same time, Clean Cities efforts accounted for more than 600,000 new AFVs on the road and helped build 73% of alternative fueling stations nationwide since 1993.

Established a Nationwide Network of Clean Cities Coalitions

Clean Cities established a national network of nearly 90 coalitions and local partnerships, encompassing three quarters of the U.S. population within their boundaries. More than 6,500 stakeholders from local businesses, city and state governments, the transportation industry, community organizations, and fuel providers participate in the coalitions. These stakeholders constitute an advanced transportation community knowledgeable about a wide range of technologies and eager to develop markets, leverage resources, collaborate on projects and policy issues, and promote alternative transportation. Each Clean Cities coalition is led by a coordinator. These coordinators have devoted up to 100,000 hours per year to Clean Cities activities, including work on community outreach and education, consumer awareness, and collaboration with auto companies and other technology manufacturers.

Renewable Energy Partners of New Mexico/PIX 13531

Since 1993, Clean Cities has reduced petroleum consumption by 2.4 billion gasoline gallon equivalents.

Clean Cities Coalitions

Dean Armstrong, NREL

Glacier National Park fuels its Red Bus fleet with propane.

Wieck Media Services

Helped "Green" Our National Parks

The Clean Cities National Parks Initiative was launched to help keep U.S. national parks clean and to harness the potential of parks to educate visitors about environmentally-friendly transportation. Clean Cities started the initiative by funding the addition of 20 AFVs and fueling stations in national parks throughout the country. Since then, the initiative has thrived. Clean Cities joined forces with major automakers and industry partners to promote the use of hybrids and other AFVs in parks. These efforts prompted Toyota to donate 23 Priuses and $5 million to support environmental education programs at five national parks, and a partnership with Ford refurbished Glacier National Park's historic Red Bus fleet to run on clean propane fuel. In 2004, Mammoth Cave National Park became one of the first national parks to power many of its vehicles with alternative fuels.

Developed Alternative Fuel Markets by Aiding EPAct Compliance

DOE's State and Alternative Fuel Provider (SFP) program has helped more than 300 state government and alternative fuel provider fleets comply with EPAct, resulting in the acquisition of 110,000 AFVs and the use of more than 21 million gallons of biodiesel. Regulated fleets have achieved virtually 100% compliance. The SFP program helps stakeholders understand the challenges facing fleets and the paths to success. It implemented an AFV credit trading system that links surplus credit buyers and sellers, developed a reporting mechanism that facilitates timely and accurate submission of annual fleet reports, and created online compliance assistance and petroleum reduction planning tools. The program also publishes numerous guidance documents to help fleets comply with their requirements and success stories that communicate innovative and effective fleet management processes. Clean Cities and the SFP program have been partnering for years to encourage collaboration among regulated fleets and their local coordinators and to educate them about installing alternative fuel infrastructure.

FuelEconomy.gov helps consumers identify, compare, and purchase efficient cars and results in substantial petroleum use reduction.

The I-65 Biofuels Corridor extends from Gary, Indiana, to Mobile, Alabama.

Dean Armstrong, NREL

Created Alternative Fuel Corridors

Clean Cities supports infrastructure projects that put alternative fueling stations along major travel corridors, enabling AFV drivers to travel long distances using alternative fuels. The longest corridor keeps flexible fuel vehicle drivers always within one-quarter tank to an E85 (85% ethanol, 15% gasoline) station while traveling from the Great Lakes to the Gulf Coast along I-65. The I-65 corridor also has several B20 (20% biodiesel, 80% petroleum diesel) stations. Other E85 corridors include the I-5 corridor in Oregon; New York State's Thruway; roads from Penn State College, Pennsylvania, to Philadelphia; and the I-95/I-64 Crescent Corridor, in Maryland, Washington, D.C., and Virginia. Clean Cities efforts helped establish corridors for other alternative fuels as well, helping California, Utah, and New York establish numerous natural gas stations along heavily traveled routes. Since 1998, Clean Cities has distributed about $35 million to build alternative fuel infrastructure projects.

Brought the Fuel Economy Guide to Millions of Car Buyers

The Fuel Economy Guide and its companion Web site at *www.fueleconomy.gov* help consumers identify, compare, and purchase efficient cars and results in substantial petroleum displacement—saving an estimated 200 million gallons this past year alone. Clean Cities produces the guide in partnership with the U.S. Environmental Protection Agency and Oak Ridge National Laboratory and has worked continually to expand its accessibility and interactivity.

In a user-friendly format, the guide provides fuel economy and emissions ratings, energy impact scores, and carbon footprint information for all vehicles back to model year 1985, plus user-provided fuel economy statistics, calculators, and additional consumer tools. The guide became even easier to use in 2008 with the addition of a special mobile Web site that enables access from mobile phones and other handheld electronic devices.

The Alternative Fuels and Advanced Vehicles Data Center *(www.afdc.energy.gov)* is the premier Web site for information about transportation technologies.

Clean Cities Success Stories are featured by MotorWeek on PBS stations.

Partnered with National Media to Get the Word Out

Since 2002, Clean Cities has collaborated with the PBS television program MotorWeek to produce more than 50 segments related to alternative fuels, advanced technology vehicles, and fuel economy. Starting in September 2009, MotorWeek began running short, bi-weekly segments that focus on coalition success stories. The weekly show airs nationally on PBS stations and satellite and cable networks and is seen by military personnel worldwide on the American Forces Network. In addition, the Fuel Economy Guide (*www.fueleconomy.gov*) uses the segments to increase the interactivity of the Web site and reinforce its message about fuel efficiency. MotorWeek's creator and host, Emmy Award winner John Davis, regularly attends national Clean Cities events, helping coordinators improve their media outreach strategies.

Created a Comprehensive Alternative Fuels and Advanced Vehicles Data Center

Clean Cities developed the Alternative Fuels and Advanced Vehicles Data Center (AFDC, *www.afdc.energy.gov*)—the premier resource for information about advanced transportation technologies. The AFDC contains comprehensive Web content and more than 3,000 documents covering the gamut of transportation options. It also provides a suite of interactive tools, including the Alternative Fueling Station Locator, fleet price calculators, and databases of transportation-related incentives and laws. In addition to informing the public, the AFDC provides technical support to Clean Cities coalitions. The AFDC Web site received more than 7 million hits in 2008.

Leslie Eudy, NREL/PIX 12293

Clean Energy Fuels/PIX 16724

Clean Cities helps promote the use of clean fuels in transit buses.

Clean Cities helps repurpose garbage by putting biomethane from landfills back into the tanks of refuse trucks.

Turned Garbage into Renewable Natural Gas

Clean Cities has helped deploy biomethane (biologically produced natural gas) technologies that were created through DOE-sponsored research and development. Landfills produce large amounts of biomethane from decomposition of waste. Collaborating with industry and national laboratories, Clean Cities demonstrated the feasibility of purifying landfill-derived biomethane and liquefying it for use in commercial trucks. The purified methane has been used successfully to fuel refuse trucks. The project identified more than 300 landfills that each have the potential to produce up to 20,000 gallons of liquefied natural gas per day.

Spearheaded a Major Increase in Alternative Fuel Transit Buses

Transit buses are big. They are driven constantly. They use a lot of fuel. Because of their centralized fueling and maintenance and predictable routes, they are well-suited to alternative fuel use. For a decade, Clean Cities has put a special focus on promoting alternative fuel use in transit applications with great success. In 1997, only 6% of U.S. transit buses operated on some form of alternative power. Ten years later, 20% of transit buses are operated on alternative power. Clean Cities coalitions were responsible for bringing more than half these alternative fuel and advanced buses to U.S. roads. The Natural Gas Transit Users Group, sponsored by Clean Cities, helped by providing information and technical assistance to transit agencies operating or considering natural gas buses. Most alternative fuel buses use compressed or liquefied natural gas. Both reduce local air pollution, greenhouse gas emissions, and dependence on imported oil.

Leveraged Public Funding to Boost Alternative Fuel Success

In the past 10 years, Clean Cities provided approximately $57 million in competitive grant funds, which were leveraged into another $245 million in matching funds from other organizations. Clean Cities coalitions stretched these dollars even further by building on the success of grant-funded projects to develop long-term partnerships with industry, other federal agencies, state agencies, and non-profit organizations. These efforts have helped coalitions obtain an additional $945 million in funding since 1998. In addition to annual program funding, the Clean Cities program provided $300 million in American Recovery and Reinvestment Act funding, which leveraged $865 million in matching funds.

Looking Forward

Many of Clean Cities' most significant accomplishments are presented in this fact sheet, but the most important achievements are yet to come. The pervasive impacts of transportation energy use have never been clearer and the public is awakening to the urgent need to end the nation's addiction to oil. Clean Cities has been a champion for this cause for more than 15 years. Today, it is ideally positioned to lead the United States toward a cleaner, more secure, more prosperous transportation future.

U.S. DEPARTMENT OF ENERGY

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