Beyond a Billion

Clean Cities Coalitions Have Displaced More Than a Billion Gallons of Gasoline

In 2004, the U.S Department of Energy's Clean Cities achieved a milestone—displacing the equivalent of more than 1 billion gallons of gasoline since 1994.

Clean Cities is a government-industry partnership designed to reduce petroleum consumption in the transportation sector. It is composed of 88 community-based coalitions, voluntary public/private partnerships that work to advance the use of alternative fuels and vehicles, idle reduction technologies, hybrid electric vehicles (HEVs), fuel blends, and fuel economy.

The cost of a billion gallons of gasoline (2005 dollars) is roughly $2.5 billion. If these billion gallons displaced imported petroleum (approximately 60% of our petroleum is currently imported), that would enable the United States to invest that amount in our economy rather than the economies of other nations.

Figure 1 displays the cumulative estimated fuel displacement achieved by Clean Cities. To put this quantity in perspective it would fill 18 supertankers or fuel 2 million cars for a year.

Substituting imported petroleum with domestically produced alternative fuels and other Clean Cities technologies improves our energy security, our national and rural economy, and our environment.

Calculating the Total

Clean Cities coordinators across the nation submit annual reports with quantitative data on progress in their coalitions in implementing the technologies mentioned above. These data were analyzed and converted into the amount of gasoline displaced by each project or activity.

The Clean Cities Portfolio

Reaching the billion-gallon mark required sustained effort over the past decade. The effort was concentrated on the following Clean Cities portfolio elements.

Alternative Fuels and Vehicles

Clean Cities advances the use of alternative fuels, which are defined by the Energy Policy Act of 1992 (EPAct) as ethanol, natural gas, propane, hydrogen, biodiesel, electricity, methanol, and p-series fuels. Clean Cities coordinators work with fleets, local and state agencies, fuel providers, and vehicle manufacturers to facilitate AFV purchases and install fuel infrastructure. Coordinators typically leverage DOE funding with grants from other sources to support projects. Alternative fuels have been the heart of the Clean Cities program since its inception in 1993, and account for the displacement of approximately 951 million gallons of gasoline since 1994.

Fuel Blends

Clean Cities encourages the use of E10 (10% ethanol/90% gasoline), B5 (5% biodiesel/95% diesel),

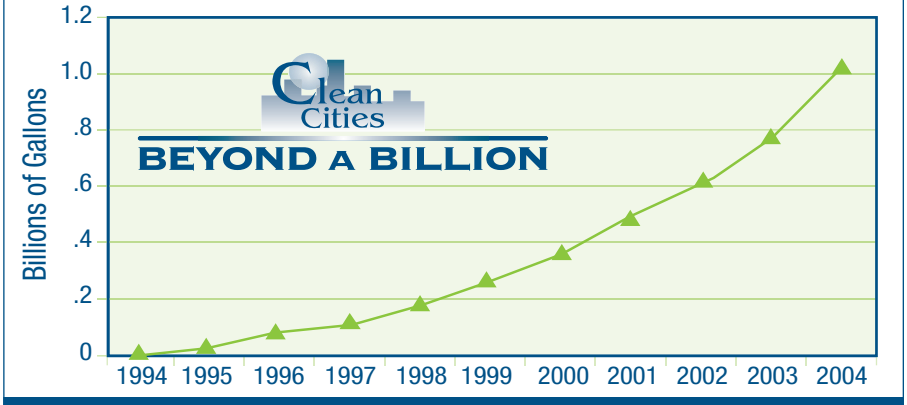

Figure 1. Cumulative Gallons of Gasoline Displaced by Clean Cities Since 1994

and B2 (2% biodiesel/98% diesel); and blends that combine alternative fuels, such as hydrogen and compressed natural gas (HCNG), which might be a combination of 20% hydrogen and 80% CNG, for example.

A total of 8.4 million gallons of gasoline were displaced by blends in 2004 (the first year blends were counted among Clean Cities portfolio elements) as a direct result of Clean Cities coalition efforts. For example, coalitions worked with government organizations to identify ethanol as the oxygenate of choice. The coalitions also collaborated with private companies to site ethanol production facilities in their states. Most of the 8.4 million gallons of gasoline were displaced by ethanol use in E10.

Fuel Economy

By helping to raise public awareness of the importance of vehicle fuel economy and helping private and commercial consumers improve their gas mileage, Clean Cities achieved 41 million gallons of gasoline displacement in 2004 – the first year results were tracked for fuel economy. Displacement was estimated based on specific vehicle-miles-traveled reduction projects and numerous outreach activities, such as distribution of, and online access to, the Fuel Economy Guide (www.fueleconomy.gov).

Table 1. Gasoline Displacement of Each Clean Cities Portfolio Element

Portfolio Element	Million Gallons Gasoline	Percent of Total
Alternative Fuel Vehicles (1994-2004)	951	93.6
Fuel Economy (2004)	41	4.1
Idle Reduction (2004)	12	1.2
Fuel Blends (2004)	8	0.8
Hybrid Electric Vehicles (2003-2004)	3	0.3
Total	**1,015**	**100**

Hybrid Electric Vehicles

Forty-one Clean Cities coalitions reported increases in the number of HEVs in their stakeholder fleets in FY 2004, bringing the number of HEVs resulting from the efforts of Clean Cities to more than 10,500. This accounts for roughly 3 million gallons of gasoline displaced. Clean Cities helped accelerate sales of hybrids by promoting local and state HEV incentives, such as rebates and HOV lane use, and educating fleet managers through ride-and-drive events and workshops.

Idle Reduction

Estimated fuel displacement for idle reduction (IR) technologies within the coalitions reached 12 million gallons of gasoline in 2004 (the first year data were gathered). Coordinators educated fleet operators on available technologies for reducing idling, including shore-power and on-board options. Clean Cites also worked with school districts to change idling practices, and with local governments to implement truck-stop electrification projects.

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In summary, saving a billion gallons of gasoline is a significant contribution to Clean Cities' mission, and it's only the beginning. The Clean Cities goal is to displace 2.5 billion gallons of gasoline annually by 2020. By helping the nation use less petroleum, Clean Cities improves the energy, economic, and environmental security of the United States.

For More Information

See the Clean Cities Web site at **www.eere.energy.gov/cleancities/** or e-mail **ccities@nrel.gov.**

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