

Clean Cities

Building Partnerships to Reduce Petroleum Use in Transportation

The U.S. Department of Energy's Clean Cities initiative advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. Clean Cities accomplishes this work through the activities of nearly 100 local coalitions. These coalitions provide resources and technical assistance in the deployment of alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and new transportation technologies, as they emerge.

Clean Cities was established in 1993 in response to the Energy Policy Act of 1992 and is housed within the U.S. Department of Energy's (DOE) Vehicle Technologies Program. Since its inception, Clean Cities has saved more than 3 billion gallons of petroleum. In doing so, the program has promoted U.S. energy independence, supported regional economic development, and reduced vehicle emissions.

Goal and Strategies

Clean Cities' overarching goal is to reduce U.S. petroleum use by 2.5 billion gallons per year by 2020. To achieve this goal, Clean Cities employs three strategies:

- Replace petroleum with alternative and renewable fuels, including natural gas, propane, electricity, ethanol, biodiesel, and hydrogen
- Reduce petroleum consumption through smarter driving practices and fuel economy improvements
- Eliminate petroleum use through idle reduction and other fuel-saving technologies and practices.



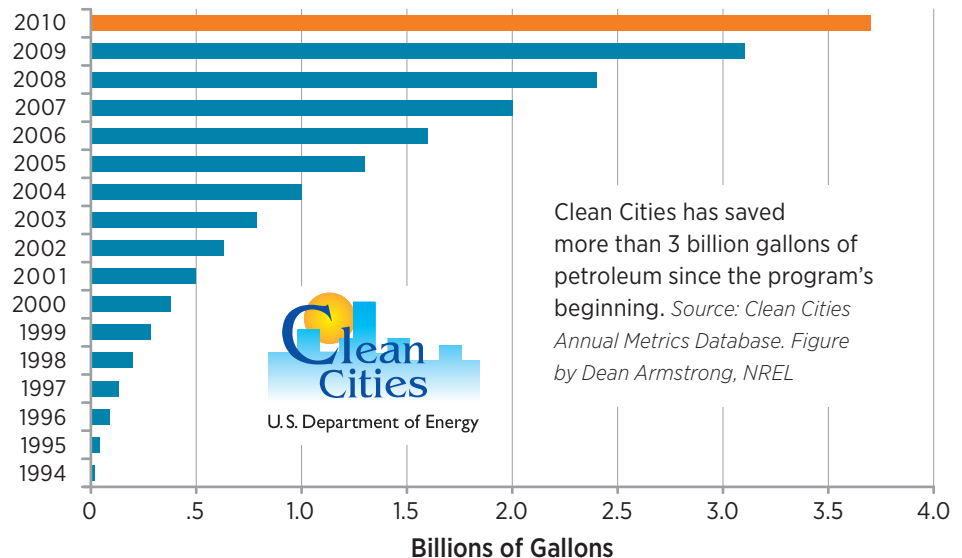
A hybrid electric bus powered by natural gas in downtown Denver. Clean Cities works to reduce petroleum use in the transportation sector by supporting the deployment of alternative fuels, advanced vehicles, and other strategies. *Photo by Pat Corkery, NREL/PIX 17976*

Clean Cities at Work

Clean Cities works to reduce U.S. dependence on petroleum in a variety of ways, at the local, state, and national levels. Clean Cities activities include:

- Establishing local coalitions of public- and private-sector stakeholders
- Providing technical assistance to fleets deploying alternative fuels, advanced vehicles, and idle-reduction measures
- Identifying funding and financial opportunities to support Clean Cities projects
- Documenting, analyzing, and publishing data from industry partners and fleets
- Developing information resources about alternative fuels, advanced vehicles, and other measures to reduce petroleum use
- Working with industry partners and fleets to identify and address technology barriers to reducing petroleum use
- Developing online tools to help stakeholders reduce petroleum consumption.

Clean Cities Cumulative Petroleum Savings



Geographical Coverage of Clean Cities Coalitions



A National Network of Local Coalitions

Nearly 100 Clean Cities coalitions work to reduce petroleum use in communities across the country. Coalitions are comprised of businesses, fuel providers, vehicle fleets, state and local government agencies, and community organizations. These stakeholders come together to share information and resources, educate the public, help craft public policy, and collaborate on transportation projects that reduce petroleum use. Nationwide, more than 10,400 stakeholders participate in Clean Cities coalitions.

Each coalition is led by a Clean Cities coordinator who tailors projects and services to meet the unique needs of individual communities. Organizations that join Clean Cities coalitions gain access to a wide array of resources, including networking opportunities with fleets and industry partners, technical training and workshops, individualized technical assistance, information resources, funding opportunities, assistance with media outreach, and public recognition for efforts to reduce petroleum use.



Clean Cities coalitions provide a forum for stakeholders in the public and private sectors to share information and resources, educate the public, help craft public policy, and collaborate on projects that reduce petroleum use. Photos (left to right): from Propel Fuels, Inc., NREL/PIX 18220; by Trish Cozart, NREL; from Allied Waste, NREL/PIX 18287

Clean Cities Accomplishments

Clean Cities efforts have helped deploy thousands of alternative fuel vehicles and the fueling stations needed to serve them, aided in the elimination of millions of hours of vehicle idling, and helped accelerate the entry of electric-drive vehicles into the marketplace.

Creating Alternative Fuel Corridors

Clean Cities supports infrastructure projects that place alternative fueling stations along major interstate highways, enabling drivers to forego petroleum when traveling long distances. The longest corridor gives flex-fuel vehicle drivers continuous access to E85 stations along I-65 from northern Indiana to southern Alabama. Other E85 corridors include the I-5 corridor in Oregon; the New York State Thruway; the route between Penn State University and Philadelphia; and the I-95/I-64 Crescent Corridor in Maryland, Virginia, and Washington, D.C.

Clean Cities projects have helped establish corridors for other alternative fuels as well, including natural gas along heavily traveled routes in California, Utah, and New York.



Clean Cities has helped to deploy thousands of alternative fuel vehicles and the fueling infrastructure required to support them. *Photo by Pat Corkery, NREL/PIX 18133*

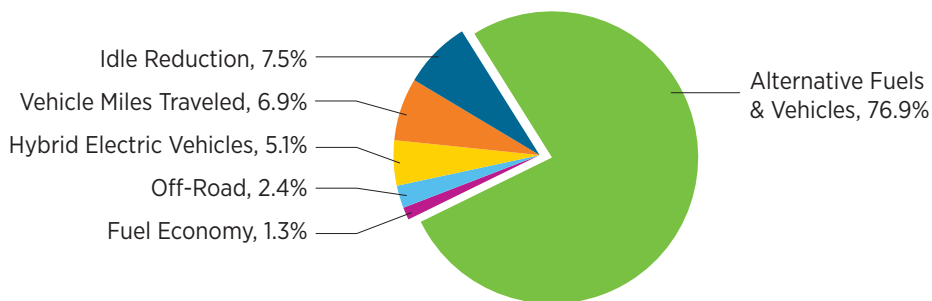
Greening Our National Parks

Clean Cities is working with the National Park Service to accelerate the deployment of alternative fuels and advanced vehicles in national parks across the country. The partnership aims to reduce petroleum use, improve air quality, relieve traffic congestion, and educate visitors. With help from Clean Cities, Mammoth Cave National Park is deploying propane buses and electric vehicles, and rangers in Grand Teton National Park are cutting fuel use with hybrid electric vehicles. Yellowstone National Park is deploying a variety of electric-drive vehicles, including a hybrid bus that uses biodiesel.

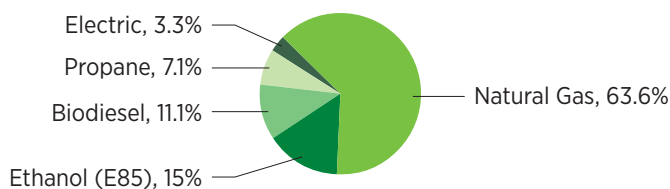
Partnering With Private-Sector Leaders

President Obama launched the National Clean Fleets Partnership to help private-sector leaders reduce petroleum use. Through the partnership, Clean Cities provides specialized resources and technical assistance to companies with large fleets as they implement alternative fuels, advanced vehicles, and fuel economy improvements. More than a dozen partners have joined the initiative, and together, they operate more than 1 million vehicles across the nation.

Clean Cities 2010 Petroleum Savings by Technology Type



Breakdown of AFV Petroleum Savings by Vehicle Type



Much of Clean Cities' petroleum savings comes from the deployment of alternative fuel vehicles (AFVs) that run on natural gas, E85, biodiesel, propane, or electricity. *Source: Clean Cities Annual Metrics Database. Figure by Dean Armstrong, NREL*



Staples and Coca-Cola joined the National Clean Fleets Partnership in 2011. Both companies are incorporating electric-drive technologies into their delivery truck fleets. *Photos by Trish Cozart, NREL/PIX 19544 (top); NREL/PIX 19684 (bottom)*

Accelerating Deployment of Plug-In Electric Vehicles

Clean Cities is playing a central role in the deployment of plug-in electric vehicles (PEVs) on U.S. roadways. In 2011, Clean Cities awarded \$8.5 million to help communities in 24 states and the District of Columbia prepare for the arrival of PEVs and plan for charging infrastructure. Clean Cities coalitions across the country are working with automakers, utilities, state and local governments, charging equipment manufacturers, and other stakeholders to accelerate the adoption of PEVs and maximize their potential to reduce emissions and petroleum use.

Photo from George Beard, Portland State University, NREL/PIX 18564



Information Resources

As the deployment arm of DOE's Vehicle Technologies Program, Clean Cities produces a comprehensive collection of information and publications for fleets, businesses, and the general public. Take advantage of the following print and online resources to learn more about Clean Cities and the fuels and technologies it supports.

Clean Cities: Visit the Clean Cities website at www.cleancities.energy.gov to find out more about the program, its accomplishments, and local coalitions.

Alternative Fuels and Advanced Vehicles Data Center (AFDC): The AFDC, online at www.afdc.energy.gov, provides a wealth of information and data about alternative fuels, advanced vehicles, and other petroleum-saving technologies. The site also features a number of interactive tools, calculators, and mapping applications, including the following:

- **Alternative Fueling Station Locator:** Find fueling sites and electric vehicle charging locations in your area (www.afdc.energy.gov/stations).
- **Incentives and Laws:** Search this database for federal and state incentives and laws related to alternative

fuels and vehicles, air quality, fuel efficiency, and other transportation-related topics (www.afdc.energy.gov/afdc/laws/).

- **Vehicle Cost Calculator:** Determine a vehicle's full cost of ownership, including fuel and maintenance costs. Compare vehicles and evaluate emissions benefits (www.afdc.energy.gov/calculator).

FuelEconomy.gov: This site is the official U.S. government source for fuel economy information. Use it to find and compare vehicles, calculate your own fuel economy, and get tips to save fuel.

Clean Cities TV: Visit www.cleancities.tv to view scores of educational videos about alternative fuels, advanced vehicles, and transportation success stories from across the country.



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Clean Cities Technical Response Service
800-254-6735 • technicalresponse@icfi.com

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Clean Cities Program Contacts

Clean Cities is funded and managed by the U.S. Department of Energy. Regional managers provide guidance and support to Clean Cities coalitions throughout the nation.

DOE Headquarters

Dennis A. Smith

National Clean Cities Director
dennis.a.smith@ee.doe.gov
202-586-1791

Linda Bluestein

Clean Cities Co-Director
linda.bluestein@ee.doe.gov
202-586-6116

DOE Regional Managers

Kay Kelly

Pacific & Mountain West
kay.kelly@go.doe.gov
720-356-1668

Dave Kirschner

Midwest
david.kirschner@netl.doe.gov
412-386-7336

Erin Russell-Story

Great Lakes
erin.russell-story@netl.doe.gov
412-386-7334

Mike Scarpino

Northeast
michael.scarpino@netl.doe.gov
412-386-4726

Brett Aristegui

California
brett.aristegui@netl.doe.gov
412-386-4641

Neil Kirschner

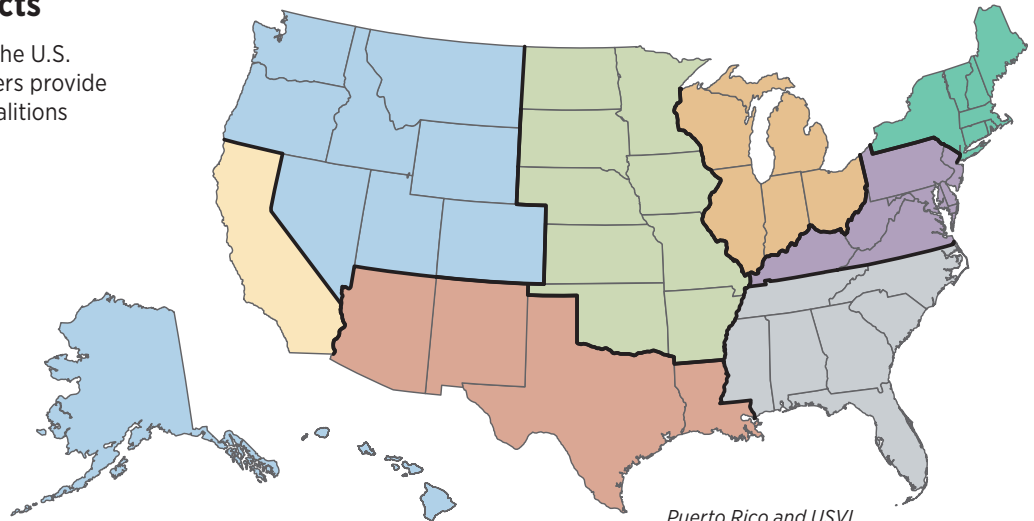
South Central
neil.kirschner@netl.doe.gov
412-386-5793

Steven Richardson

Southeast
steven.richardson@netl.doe.gov
304-285-4185

Darren Stevenson

Mid-Atlantic
darren.stevenson@netl.doe.gov
412-386-4746



Puerto Rico and USVI included in Mid-Atlantic Region

Clean Cities Coordinators

Each Clean Cities coalition is led by a coordinator. Contact a coordinator to find out more about Clean Cities activities in your area.

AL-Alabama

Mark Bentley
205-402-2755
mark@alabamacleanfuels.org

AR-Arkansas

Mitchell Simpson
501-682-1060
msimpson@arkansasedc.com

AZ-Valley of the Sun (Phoenix)

Bill Sheaffer
480-314-0360
bill@cleanairaz.org

AZ-Tucson

Colleen Crowninshield
520-792-1093, x426
ccrowninshield@pagnet.org

CA-Antelope Valley (Lancaster)

Curtis Martin
661-492-5916
visioncc@verizon.net

CA-Central Coast (San Luis Obispo)

Melissa Guise
805-305-5491
mguise@co.slo.ca.us

CA-Coachella Valley Region

Richard Cromwell III
760-329-6462
rcromwell@cromwellandassociates.com

CA-East Bay (Oakland)

Richard Battersby
530-752-9666
rebattersby@ucdavis.edu

CA-Long Beach

Richard Steinhaus
562-570-5407
richard.steinhaus@longbeach.gov

CA-Los Angeles

Wayne King
213-485-3936
wayne.king@lacity.org

CA-Sacramento

Keith Leech
916-808-5869
KLeech@cityofsacramento.org

CA-San Diego Regional

Mike Ferry
858-244-7287
mike.ferry@energycenter.org

CA-San Francisco

Bill Zeller
415-355-3728
william.zeller@sfgov.org

CA-San Joaquin Valley (Bakersfield)

Linda Urata
661-342-8262
iwantcleanair@aim.com

CA-Silicon Valley (San Jose)

Margo Sidener
408-998-5865
margo@LungsRUs.org

CA-Southern California Assn. of Governments

Matt Horton
213-236-1980
Horton@scag.ca.gov

CA-Western Riverside County

Jennifer DiCiano
951-955-8587
DiCiano@wrcog.cog.ca.us

CO-Denver

Natalia Swalnick
303-847-0271
nswalnick@lungcolorado.org

CO-Northern Colorado

Sheble McConnellogue
970-302-0914
northcolo@cleancitiescolorado.org

CO-Southern Colorado

Sarah Martin
719-494-6592
sarah@cleancitiescolorado.org

CT-Capital Clean Cities (Manchester)

Craig Peters
800-255-2631
craig.peters@manchesterhonda.com

CT-Southwestern Area (Fairfield)

Ed Boman
203-256-3010
EBoman@town.fairfield.ct.us

CT-New Haven

Lee Grannis
203-627-3715
lgrannis@snet.net

CT-Norwich

Peter Polubiatko
860-887-6964
pete@askncdc.com



U.S. Department of Energy

DC-Washington

Ron Flowers
202-671-1580
ron.flowers@dc.gov

DE-State of Delaware

Jessica Quinn
302-735-3485
Jessica.Quinn@state.de.us

**FL-Gold Coast (Miami-Dade/
Broward/Palm Beach/Monroe)**

Christine Heshmati
954-985-4416
cheshmati@sfrpc.com

FL-Central Florida

Colleen Kettles
321-638-1004
ckettles@fsec.ucf.edu

GA-Atlanta

Don Francis
404-906-0656
don@cleancitiesatlanta.net

HI-Honolulu

Robert Primiano
808-768-3500
rprimiano@honolulu.gov

IA-State of Iowa

Stephanie Weisenbach
515-725-3007
stephanie.weisenbach@iowa.gov

ID-Treasure Valley (Boise)

Beth Baird
208-384-3984
bbaird@cityofboise.org

IL-Chicago

Samantha Bingham
312-744-8096
samantha.bingham@cityofchicago.org

IN-Greater Indiana

Kellie Walsh
317-985-4380
kellie@greaterindiana.com

IN-South Shore (Gary)

Carl Lisek
219-644-3690
southscc@comcast.net

KS/MO-Kansas City

Kelly Gilbert
816-561-1625
kgilbert@kcenergy.org

**KY-Kentucky Clean
Cities Partnership**

Melissa Howell
502-452-9152
kycleanfuels@insightbb.com

LA-Baton Rouge

Lauren Stuart
225-342-5141
gbrccc@gmail.com

LA-SE Louisiana Clean Fuel

Rebecca Otte
504-483-8513
slcftp@norpc.org

MA-Massachusetts

Stephen Russell
617-626-7325
Stephen.Russell@state.ma.us

MD-Maryland

Chris Rice
410-260-7207
crice@energy.state.md.us

ME-Maine Clean Communities

Steven Linnell
207-774-9891
slinnell@gpcog.org

MI-Ann Arbor

Mark Rabinsky
734-585-5720, x24
mark@cec-mi.org

MI-Detroit

Matt Sandstrom
734-585-5720, x27
matt@cec-mi.org

MI-Greater Lansing

Maggie Striz Calnin
517-925-8649, x17
maggie@kbsincorporated.com

MN-Twin Cities

Lisa Thurstin
651-223-9568
lisa.thurstin@lungmn.org

MO-St. Louis

Kevin Herdler
314-397-5308
kevin@stlcleancities.org

NC-Centralina (Charlotte)

Jason Wager
704-348-2707
jwager@centralina.org

**NC-Land of Sky (Western
North Carolina)**

Bill Eaker
828-251-6622
Bill@landofsky.org

**NC-Triangle Coalition (Raleigh,
Durham, Chapel Hill)**

Lacey Jane Wolfe
919-558-2705
lacey@tjco.org

ND-North Dakota

Joey Roberson-Kitzman
701-223-5613
joey.roberson-kitzman@lungnd.org

NH-Granite State (State of NH)

Dolores Rebolledo
603-271-6751
dolores.rebolledo@des.nh.gov

NJ-New Jersey

Chuck Feinberg
973-886-1655
chuck.feinberg@gmail.com

**NM-Land of Enchantment
(Albuquerque)**

Frank Burcham
505-856-8585
loecleancities@comcast.net

NV-Las Vegas

Ron Corbett
702-350-0025
info@lasvegascleancities.org

NV-Eastern Sierra

James Brandmueller
775-721-3223
jbrandmu@nvbell.net

NY-Capital District (Albany)

Jennifer A. Ceponis
518-458-2161
jceponis@cdtcmpo.org

**NY-Central New York
(Syracuse)**

Barry Carr
315-278-2061
bcarr@cc-cny.com

**NY-Genesee Region
(Rochester)**

David Keefe
585-301-2433
dkeefe@grcc.us

NY-Long Island

Rita D. Ebert
631-504-5771
rebert@glccc.org

NY-Empire Clean Cities

Christina T. Ficicchia
212-839-7728
christina@empirecleancities.org

NY-Western New York (Buffalo)

Craig Jackson
716-362-9543
cjackson@cobey.com

**OH-Clean Fuels Ohio
(Columbus)**

Sam Spofforth
614-884-7336
sam@cleanfuelsohio.org

OH-Northeast Ohio (Cleveland)

Elaine Lipman Barnes
216-281-6468, x223
ebarnes@earthdaycoalition.org

OK-Central Oklahoma

Yvonne Anderson
405-234-2264
yanderson@acogok.org

OK-Tulsa

Meredith Webber
918-579-9434
MWebber@incog.org

**OR-Columbia-Willamette
(Salem)**

Rick Wallace
503-378-3265
rick.wallace@state.or.us

OR-Rogue Valley (Medford)

Sue Kupillas
541-245-0770
ASK@opusnet.com

PA-Philadelphia

Tony Bandiero
215-990-8200
director@phillycleancities.org

PA-Pittsburgh

Richard Price
412-735-4114
rprice5705@aol.com

RI-Ocean State (Rhode Island)

Wendy Lucht
401-874-2792
wlucht@uri.edu

**SC-Palmetto State
(South Carolina)**

Jennifer Taraskiewicz
803-737-8037
jtaraskiewicz@energy.sc.gov

TN-East Tennessee (Knoxville)

Jonathan G. Overly
865-974-3625
jgoverly@utk.edu

**TN-Middle Tennessee
(Nashville)**

Atha Comiskey
615-884-4908
mtcf@comcast.net

TX-Alamo Area (San Antonio)

Christopher Ashcraft
210-362-5228
CAshcraft@aacog.com

TX-Lone Star (Central Texas)

Stacy Neef
512-974-7623
stacy.neef@lonestarcfa.org

TX-Dallas/Fort Worth

Pamela Burns
817-704-2510
pburns@nctcog.org

TX-Houston-Galveston

Allison Carr
713-993-2444
cleancities@h-gac.com

UT-Utah

Robin Erickson
435-634-4361
Robin.Erickson@utahcleancities.org

VA-State of Virginia

Alleyn Harned
540-568-8896
aharned@vacleancities.org

VT-State of Vermont

Tom McGrath
802-656-9864
tmcgrath@uvm.edu

**WA-Western Washington
(Seattle)**

Stephanie Meyn
206-689-4055
StephanieM@pscnaair.org

WI-Southeast Area (Milwaukee)

Lorrie Lisek
414-221-4958
legacyenv@comcast.net

WV-State of West Virginia

Kelly Bragg
800-982-3386, x2004
kelly.a.bragg@wv.gov

**WY-Yellowstone-Teton
(Wyoming, Montana, Idaho)**

Phillip Cameron
307-413-1971
phil@ytcleanenergy.org

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
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Clean Cities Technical Response Service
800-254-6735 • technicalresponse@icfi.com

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