

Clean Cities Coordinator Talking Points

- Program
- Fuels
- Technologies



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Clean Cities Mission

- Clean Cities is a government-industry partnership designed to cut petroleum use in transportation.
- Clean Cities advances the nation's economic, environmental, and energy security.
- Established in 1993, the program fosters community based partnerships through local coalitions that work with stakeholders such as vehicle fleets, utilities, local governments, fuel providers, equipment manufacturers, and community organizations.
- Using national and local expertise, Clean Cities helps fleet managers find the solutions that meet their needs.
- Coalitions provide unbiased information and facilitate local projects related to:
 - Biofuels
 - Gaseous fuels (natural gas and propane)
 - Plug-in electric vehicles
 - Idle-reduction measures
 - Fuel economy improvements.
- Clean Cities helps drivers and fleets:
 - Reduce dependence on petroleum
 - Reduce emissions (including GHGs)
 - Save money (via alternative fuels and efficiency).
- Clean Cities is part of DOE's Vehicle Technologies Office. Coalitions are independent organizations that receive support and resources from the national program.

Clean Cities Accomplishments

- Since 1993, the program has helped to reduce petroleum consumption by nearly 6.5 billion gallons. In 2013 alone, activities cut petroleum use by 1 billion gallons and put 475,000 AFVs on the road. These actions prevented 7.5 million tons of GHG emissions.
- Clean Cities includes almost 100 coalitions and 14,000 stakeholders (coalitions cover approximately 80% of U.S. population).
- Program efforts and funds leverage significant cost share and matching dollars, supporting more than 500 transportation projects nationwide, totaling more than \$1 billion in joint public/private sector investment.
- More than 20 interactive, data-driven tools, many of which are mobile or available as widgets, can be found on the AFDC website and FuelEconomy.gov. For example:
 - Alternative Fueling Station Locator, State Information Tool, Vehicle Cost Calculator, Vehicle Search, and AFLEET Tool
 - Find a Car (FuelEconomy.gov).
- FuelEconomy.gov (with EPA) helps consumers save millions of gallons of petroleum every year.
- With MotorWeek, Clean Cities has helped produce more than 100 national TV segments on transportation success stories.
- Coalitions have produced almost 300 educational videos, housed on the Clean Cities YouTube channel.

Biodiesel

- Biodiesel is a renewable fuel produced from vegetable oils, animal fats, or recycled oils.
- The fuel is domestically produced and biodegradable.
- B5 is approved for use in all diesel engines and existing infrastructure, and blends up to B20 can be used in most diesel engines with few or no modifications.
- Biodiesel fuel must meet national standards (ASTM D6751 for B100; ASTM D7467 for B6 to B20).
- There are more than 750 B20-and-above public and private fueling stations in the U.S.
- B100 reduces life cycle GHG emissions by 52% compared to diesel. Blends reduce GHG emissions in proportion with the blend level. In older engines (Model Year 2010 and older), biodiesel reduces PM, CO, and HC tailpipe emissions.
- Biodiesel produced from soybean oil, recycled oils, animal fats, and certain biomass-based oils is eligible to meet EPA's Renewable Fuels Standard (RFS2).

Ethanol

- Ethanol is a renewable fuel made from plant-based (biomass) feedstocks.
- E10 is the most common blend of ethanol, but E85 (51%–83% ethanol) is available at more than 2,800 public and private fueling stations across the U.S.
- Blender pumps can offer gasoline, E85, and blends of the two (most commonly E20 and E30).
- Any blends above E15 are for use in FFVs only. More than 80 Model Year 2015 FFV models are available.
- Most ethanol used in the U.S. is produced from corn. Ethanol can also be produced from cellulosic feedstocks like crop residues and wood.
- Ethanol sold in the U.S. is almost entirely produced from domestic crops.
- Using corn-based ethanol instead of gasoline reduces life cycle GHG emissions by 19%–52%. Cellulosic ethanol could reduce life cycle GHG emissions by 86%.
- The fuel economy of an FFV running on E85 is about 27% lower than its fuel economy on gasoline.
- E15 is approved for use in conventional vehicles of Model Year 2001 and newer.

Propane

- Propane is also known as liquefied petroleum gas (LPG).
- It is produced domestically as a byproduct of natural gas processing and crude oil refining.
- Compared with other alternative fuels, propane has high energy density and gives vehicles good driving range.
- Propane is safe for use in vehicles and has a narrower flammability range than gasoline.
- There are more than 3,000 public and private propane vehicle fueling stations in the U.S.
- Propane vehicles are available in dedicated and bi-fuel models.
- Although there are 675,000 school buses in use today, only 2% of all school districts use propane buses (creating a great opportunity for expansion in this area).
- Propane vehicles have power, acceleration, and cruising speed similar to conventional vehicles.
- Vehicles running on propane can reduce life cycle GHG emissions by approximately 10%, depending on vehicle type, drive cycle, and engine calibration.

Natural Gas

- Natural gas can be stored as a fuel on vehicles in two ways: compressed (CNG) and liquefied (LNG).
- Virtually all natural gas consumed in the U.S. comes from North America.
- Renewable natural gas (also known as bio-methane) is produced from decaying organic materials, such as landfill and livestock waste.
- Many heavy-duty truck and bus fleets are already using natural gas. Nearly 20% of all transit buses and 50% of refuse trucks purchased in the U.S. annually are powered by natural gas (according to NGV America).
- Today, there are more than 150,000 natural gas fleet vehicles on the road, according to NGV Journal.
- There are more than 1,600 public and private natural gas fueling stations in the U.S.
- Natural gas is safe for use in vehicles. It has a narrower flammability range than gasoline. In the event of an accidental leak, natural gas is lighter than air and dissipates into the atmosphere.
- Natural gas vehicles are available in dedicated and bi-fuel models.
- Natural gas vehicles have power, acceleration, and cruising speed similar to conventional vehicles.
- Natural gas emits approximately 10% lower levels of life cycle GHG emissions than gasoline. Renewable natural gas can provide even greater emissions benefits.

Electric-Drive Vehicles

- Vehicles can be divided into three categories: HEVs, PHEVs, and EVs. All of these have batteries and electric motors, although only EVs and PHEVs can be charged by “plugging in.”
- Hybrid Electric Vehicles (HEVs):
 - Have an internal combustion engine and electric motor
 - Do not plug in; are typically fueled with gasoline or diesel
 - Battery is charged through regenerative braking and by the internal combustion engine.
- Plug-In Hybrid Electric Vehicles (PHEVs):
 - Have an internal combustion engine and electric motor
 - Plug in and can run either on electricity or a conventional or alternative fuel
 - Have all-electric ranges of 10 to 80 miles. On a depleted battery, fuel economy is similar to an HEV.
- Electric Vehicles (EVs):
 - Have an electric motor only (thus are also called “all-electric” vehicles)
 - Plug in and run exclusively on electricity
 - Most EVs have a range of about 100 miles per charge, with some as high as 265 miles.

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Electric-Drive Vehicles (continued)

- Three kinds of modern charging equipment (EVSE) are now available:
 - Level 1 (AC/120V): 2–5 miles of range per hour of charging (residential/public)
 - Level 2 (AC/240V): 10–60 miles of range per hour of charging (residential/public)
 - DC Fast (DC/208–600V): 60–100 miles of range in 20 minutes (public).
- There are more than 10,500 non-residential EVSE locations in the U.S.
- It costs \$1.28 to drive a plug-in electric vehicle the same distance you could on a gallon of gasoline.
- EVs and PHEVs running on electricity alone produce zero tailpipe emissions.
- HEVs, PHEVs, and EVs generally produce lower life cycle emissions than conventional vehicles. Emissions from electricity production depend on grid mix and efficiency of power plants. EV and PHEV drivers can lower their life cycle emissions even further by using renewable electricity.

Safety

- All alternative fuels must be produced, stored, and dispensed according to federal guidelines, such as those of the NFPA and NHTSA.
- All AFVs must meet the same safety standards and undergo the same rigorous safety testing as conventional vehicles.
- Alternative fuel conversion systems must be approved by EPA (or applicable state agencies) and installed by certified professionals.
- While alternative fuels and advanced vehicles can be just as safe as conventional fuels/vehicles, first responders and other critical service providers should be trained on how to handle them.
- For fuel-specific regulation guidelines, refer to the AFDC website.

Conserving Fuel

- Improving fuel economy reduces petroleum use and emissions.
- FuelEconomy.gov offers fuel economy tips, comparisons among vehicles, and information about advanced vehicles.
- Each 5 mph over 50 mph is like paying another 14 cents per gallon for gas, assuming gasoline costs \$2.07 per gallon.
- Sensible driving (obeying speed limits, using cruise control and overdrive gears, accelerating gradually, smarter trip planning) has an immediate impact on fuel economy.
- Keep tires inflated, remove excess weight, and keep your engine tuned to increase fuel economy.
- Rightsizing can help fleet managers build and maintain sustainable fleets.

Idle Reduction

- An idling vehicle gets 0 mpg, regardless of vehicle size or fuel.
- While individual idling episodes may be brief, the cumulative impact of all idling events is large.
- Idling vehicles burn an estimated 6 billion gallons of fuel annually in the U.S.
- Drivers should minimize idling their cars to warm them up (most manufacturers recommend driving off gently after about 30 seconds) to decrease fuel costs and reduce emissions.
- Idling increases fuel and maintenance costs, engine wear, emissions, and noise.
- Idling more than just a few minutes is illegal in many states and cities.
- Idle reduction equipment can maintain cabin comfort and supply auxiliary power for most fleet applications, including power take-off.
- Truck stop electrification equipment (electrified parking spaces) provides truckers with electric power, heating, ventilation, and air conditioning during their extended rest periods without idling.

Energy and Environmental Security

- The U.S. imports about 33% of the petroleum it consumes.*
- The U.S. consumed approximately 19 million barrels per day of petroleum products in 2013, making it the largest petroleum consumer in the world.*
- Petroleum products accounted for 92% of energy used in the U.S. transportation sector in 2013.*
- The U.S. transportation sector accounts for more petroleum consumption than any other sector.*
- In 2013, the top five sources of net U.S. oil and petroleum product imports were Canada, Saudi Arabia, Mexico, Venezuela, and Russia, in order of volume.*
- In the U.S., petroleum accounts for more CO₂ emissions than any other fossil fuel.*
- In 2012, the U.S. was responsible for about 16% of the world's energy related CO₂ emissions. The transportation sector accounts for almost one-third of U.S. greenhouse gas emissions from energy, giving it a significant role in global Climate Change.*
- Over the past 10 years, U.S. gasoline prices have fluctuated from below \$2/gallon to more than \$4.* In contrast, U.S. average vehicle age is more than 11 years. So, when purchasing a vehicle and considering the cost of ownership, a buyer should remember that fuel costs may easily double during the vehicle's lifetime.

* According to the Energy Information Administration

Interviewing Checklist

- **Be prepared:** Create a list of major points and relevant examples, research the outlet's audience and the reporter's beats, anticipate controversial topics, brainstorm a list of possible questions, and prepare answers. Call the TRS if you need help preparing.
- **Bring resources for the reporter:** These include related fact sheets, publications, hand-outs, and press releases. Refer to the AFDC website or other resources for more information.
- **Stay on message:** Clean Cities technologies reduce U.S. dependence on petroleum and harmful emissions. They can also save money for drivers and fleets. Clean Cities can help drivers and fleets find the solutions that meet their needs.
- **Keep it short:** Make one or two major points per question and stay on topic.
- **Be clear:** Speak slowly, avoid using acronyms and jargon, and mention your coalition by name.
- **Be professional:** Be aware of your body language, dress professionally but comfortably, and avoid wearing patterns.
- **Talk to the audience:** Provide local examples for a local paper; use technical terms for a trade publication.
- **Follow up:** Write a thank-you message or call; provide contact info for follow-up questions and make yourself available.

List of Acronyms

B5	5% biodiesel, 95% petroleum diesel blend
B20	20% biodiesel, 80% petroleum diesel blend
B100	pure biodiesel
AFDC	Alternative Fuels Data Center
AFLEET	Alternative Fuel Life-Cycle Environmental and Economic Transportation
AFV	alternative fuel vehicle
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
DOE	U.S. Department of Energy
E10	10% ethanol, 90% gasoline blend
E15	15% ethanol, 85% gasoline blend (approved for use in MY2001 and newer vehicles)
E20	20% ethanol, 80% gasoline blend
E30	30% ethanol, 70% gasoline blend
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
EVSE	electric vehicle supply equipment
FFV	flex-fuel vehicle
GHG	greenhouse gas
HC	hydrocarbons
HEV	hybrid electric vehicle
LNG	liquefied natural gas
LPG	liquefied petroleum gas (propane)
mpg	miles per gallon
mph	miles per hour
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
PHEV	plug-in hybrid electric vehicle
PM	particulate matter
RFS2	Renewable Fuel Standard
TRS	Technical Response Service



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