



# SAN DIEGO REGIONAL



# CLEAN CITIES COALITION

## Propane Autogas in the San Diego Region

Kevin Wood  
August 13, 2013

# Clean Cities Strengthens Markets

- Reduce the use of petroleum in transportation
- Connecting fleets with fuel providers and industry partners
- Training and information
- Technical assistance
- Education and outreach to decision makers, fleets, and the public



# Board of Directors



# Increasing adoption of alt fuels

- Greater availability of vehicles
- Rising price of gasoline and diesel
- Growing concern about the environment
- More infrastructure to support fleets & consumers



U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

## Alternative Fuels & Advanced Vehicles Data Center

About the AFDC | Fuels | Vehicles | Fleets | Incentives & Loans | Data, Analysis & Trends | Information Resources

*Celebrating 20 Years*  
of Alternative Fuel Information

The Alternative Fuels and Advanced Vehicles Data Center (AFDC) provides information, data, and tools to help fleets and other transportation decision makers find ways to reduce petroleum consumption through the use of alternative and renewable fuels, advanced vehicles, and other fuel-saving measures.

**Fuels**

- Hydrogen
- Natural Gas
- Propane

**More About**

**Vehicles**

- Conversion
- Electric Drive
- Flex Fuel

**More About**

**Data**

Our Data, Analysis and section provide facts based on

State Information

**Tools**

- Alternative Fueling Station Locator
- Incentives & Loans Search
- Light-Duty Vehicle Search
- Heavy-Duty Vehicle Search
- Publications

**More Tools**

This site is an initiative of the U.S. Department of Energy's **Clean Cities** program.

Printable Version

### Natural Gas Basics

Natural gas powers more than 100,000 vehicles in the United States and roughly 11.2 million vehicles worldwide.<sup>1</sup> Natural gas vehicles (NGVs) are a good choice for high-mileage fleets—such as buses and taxis—that are centrally fueled or operate within a limited area. The advantages of natural gas as an alternative fuel include its domestic availability, widespread distribution infrastructure, low cost compared with gasoline and diesel, and clean-burning qualities.

#### What is natural gas?

Natural gas is an odorless, nontoxic, gaseous mixture of hydrocarbons—predominantly methane (CH<sub>4</sub>). Because it is a gas, it must be stored onboard a vehicle in either a compressed gaseous or liquefied state. Compressed natural gas (CNG) is typically stored in a tank at a pressure of 3,000 to 3,600 pounds per square inch. Liquefied natural gas (LNG) is super-cooled and stored in its liquid phase at -260°F in special insulated tanks. Natural gas is sold in units of gasoline or diesel gallon equivalents based on the energy content of a gallon of gasoline or diesel fuel.

#### How and where is natural gas produced and distributed?

Natural gas is drawn from wells or extracted in conjunction with crude oil production. Biomethane, a renewable form of natural gas, is produced from

cooking, one-third to industrial uses; and one-third to electric power production. Only about one-tenth of 1% is used for transportation fuel.

#### Is natural gas safe for use in vehicles?

Yes. NGVs meet the same safety standards as gasoline and diesel vehicles and also meet the National Fire Protection Association's (NFPA) NFPA 52 Vehicular Fuel System Code. Natural gas has a narrow flammability range and, because it is lighter than air, dissipates quickly if released. NGV fuel tanks are strong and extremely puncture resistant.

#### What NGVs are available?

A wide variety of new, heavy-duty NGVs are available. The Honda Civic GX is the only light-duty NGV available from a U.S. original equipment manufacturer (OEM). Consumers and fleets also have the option of economically and reliably

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

## Clean Cities 2012 Vehicle Buyer's Guide

Natural Gas

Electric

B20 Biodiesel  
80% No. 2 Diesel

FLEXFUEL

- Natural Gas
- Propane
- Electric
- Ethanol Flex-Fuel
- Biodiesel

# San Diego Regional Clean Cities Coalition

Accelerating the Use of Alternative Fuels and Alternative Fuel Vehicles

- Home
- About
- For Fleet Managers
- For Consumers
- Alt Fuels
- Resources
- Calendar of Events
- Membership Program
- Contact



### Biofuels Event Recap

Nearly fifty attendees who came out for our event yesterday, What's Driving Biofuels? A Discussion with the Experts. Jennifer Case of New Leaf Biofuels shared lots of great information about the future of biodiesel and how it is used by consumers today and Jorge Barra of Propel Fuels discussed the benefits of ethanol and how ...read more



Reminder: Clean Cities Propane Event – Tuesday, August 13



Carl Moyer Program Funding Available – SD APCD Now acceptin



Under gray skies, Chula Vis becomes "greener" with car2



Biofuels Event Recap

**Reminder: Clean Cities Propane Event – Tuesday, August 13**

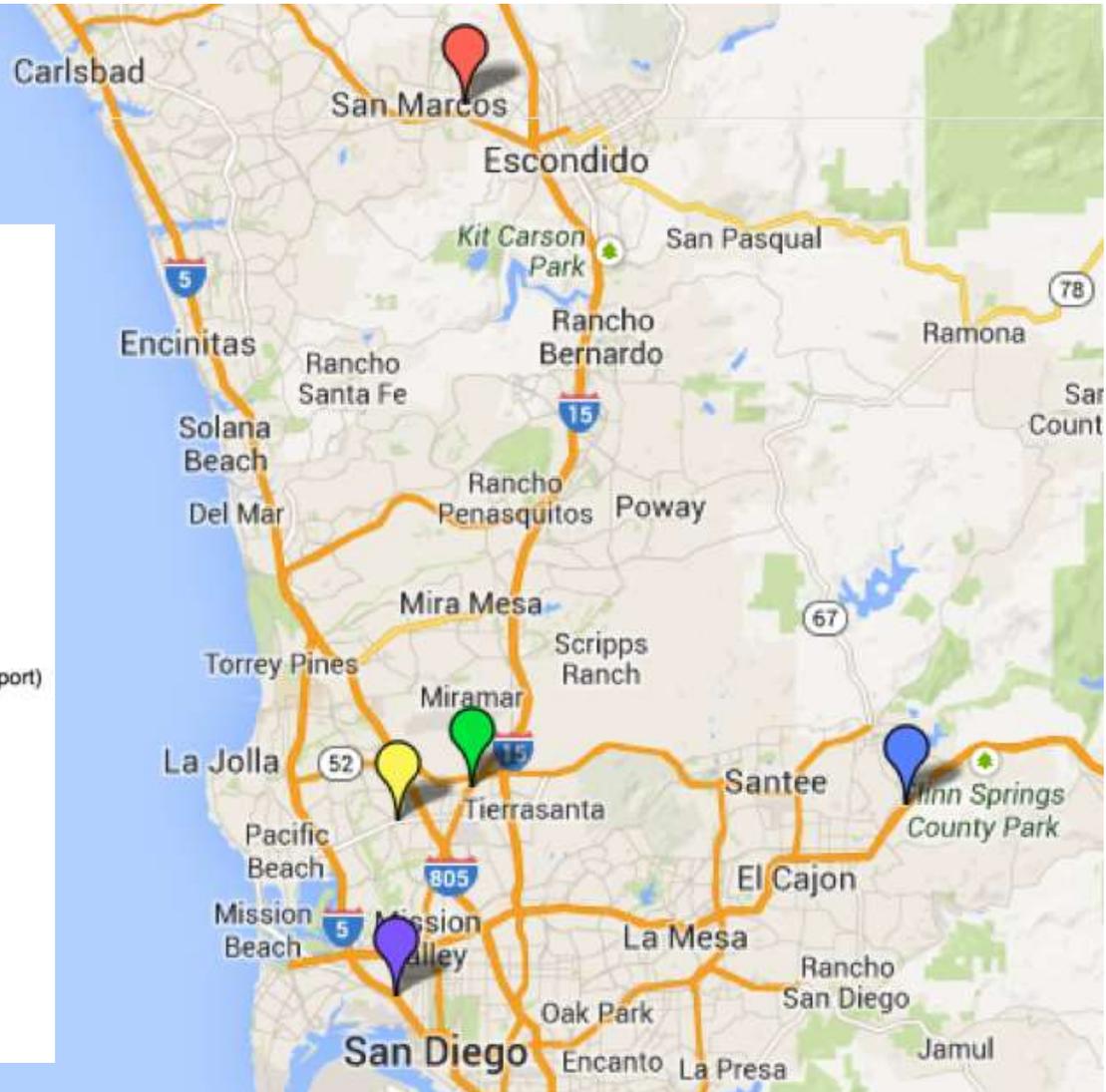
# Fueling the Future



- Erik Bates, ROUSH CleanTech
  - Propane Overview
  - Roush Products
  - Fleet Experiences/Savings
- Jon Van Bogart, Clean Fuel USA
  - Vehicles and Infrastructure
- Steve Moore, Expo Propane
  - Regional Infrastructure
- Discussion / Q&A
- Lunch- Networking

# EXPO PROPANE

Propane Vehicle Exposition



-  **76 Station**  
5790 Balboa Avenue  
San Diego, CA 92111  
(between 805 @ 5 Freeways)  
(NOW OPEN)
-  **Expo Propane**  
5596 Kearny Mesa Road  
San Diego, CA 92111  
(163 Freeway @ Clairemont Mesa Blvd. off ramp)  
(NOW OPEN)
-  **Expo Propane**  
3650 1/3 Kettner Blvd.  
San Diego, CA 92101  
(5 Freeway @ Washington Street off ramp, near San Diego Airport)  
(NOW OPEN)
-  **Eagle Gas**  
8445 Los Coches Road  
El Cajon, CA 92021  
(8 Freeway @ Los Coches Road offramp)  
(OPEN BY SEPTEMBER 30)
-  **Diamond Environmental**  
807 E. Mission Road  
San Marcos, CA 92069  
(off the 78 Freeway)  
(OPEN BY SEPTEMBER 30)

# EXPO PROPANE

*Propane Vehicle Exposition*

