

# Natural Gas Vehicles

A CASE STUDY FROM SOUTHERN CALIFORNIA GAS COMPANY

Many businesses and governmental agencies are discovering the advantages of adding natural gas vehicles (NGVs) to their fleets.

Such vehicles have a positive impact on air quality, public health and transportation economics since natural gas burns more cleanly than other fossil fuels and typically costs less at the pump than gasoline and diesel.

Offering you the following case study\* of real-world NGV experience is part of Southern California Gas Company's commitment to providing exceptional customer service.

## A city shares its track record on CNG vehicles

The City of Ontario is a growing community of more than 170,000 people in nearly 50 square miles of San Bernardino County. The city's Equipment Services Department maintains and repairs approximately 925 motor vehicles and equipment used in providing city services such as police, fire, solid-waste collection, park and street maintenance, and utilities. Within this fleet are 60 vehicles that run on compressed natural gas (CNG). These include 75% of the solid-waste trucks plus assorted pickups and medium-duty trucks that are used five days a week in the normal course of city operations.



Photos by Larry Scott

City of Ontario solid-waste trucks fill up on compressed natural gas (CNG) each night at the city's on-site fuel station.

### "Still the best choice"

Ontario started using CNG vehicles in 1994, when the South Coast Air Quality Management District (SCAQMD) mandated the use of vehicles fueled by alternatives to gasoline and diesel for the clean-air benefits. Although the current fleet includes one 1995 electric pickup truck and a few propane trucks, Equipment Services Director Sidney Phillips of Ontario's Public Works/Community Services Agency says that even today – despite some challenging issues – "natural gas engines are still the best choice in the alternate fuel arena. Engines are reliable and fueling is easy compared to other alternate fuel choices."

### On-site fueling "vital" for Ontario's fleet

On-site fueling is "vital" to the operation of the city's CNG vehicles, Phillips says. "The larger the percentage of the fleet that is on alternate fuel, the more critical it is to have that fuel on site and available. The priority of having backup and alternate fueling sources is even more critical."

The city opened its first CNG fuel station in 1994 to serve its private fleet as well as to provide public-access fueling. The city expanded the station in 2002 by adding a second large compressor and is currently considering installing a third compressor for increased



Refueling at the City of Ontario's public-access CNG station.

Photos by Larry Scott

reliability. The new station also pipes natural gas underground and across the street to supply fuel to time-fill posts fueling CNG school buses owned by the Ontario-Montclair School District.

### Meeting the compressor challenge

"Our biggest challenge has been our refueling compressors," Phillips says, citing the high cost of parts and availability of parts needed to maintain the station. "My advice, if you decide to build your own refueling station, is to select equipment from proven vendors that can easily provide on-site services. Select suppliers that have a large market share and maintain adequate component inventories. This way, you will avoid supply problems due to searching for rare and discontinued parts."

### Grant funding helps reduce additional costs

Multiple grant funding opportunities from SCAQMD have helped cover the cost of construction, expansion and upgrades of the CNG refueling station. In addition, the City of Ontario received grant funding for the purchase of CNG vehicles, says Phillips. "We have applied for and been awarded MSRC (Mobile Source Air Pollution Reduction Review Committee) funding to help cover the incremental cost difference of CNG over diesel-power vehicles."

Starting from the original fueling site design and construction through current upgrades and expansions, the City of Ontario receives information and assistance from many alternative-fuel industry leaders. Phillips notes that his Southern California Gas Company Account Executive "continues to be a valuable resource, sharing current industry knowledge and presenting opportunities to provide clean-energy solutions."

Phillips also says that even though CNG costs less than diesel fuel, "the entire lifecycle costs for the natural gas engines may be higher," though probably within 10% of each other. He also has concerns about ongoing availability of certain types of CNG cylinders and questions about future resale value of used CNG solid-waste trucks versus their diesel counterparts.

But with the clean-air benefits, Phillips says, "the use of alternate fuels is here to stay. My advice to other fleets is 'Don't be afraid.'"

**For more information  
about NGVs, please  
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