

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.

CNG buses make inroads at school district

The Placentia-Yorba Linda Unified School District serves 27,000 kindergarten through 12th-grade students in 33 schools dotting 45 square miles of Orange County. Although the district replaced most of its bus fleet in 1994 with diesel-powered models expected to last about 20 years, it welcomed the opportunity to replace six circa-1985 diesel buses with ones that run on compressed natural gas (CNG).



Photos courtesy of Placentia-Yorba Linda Unified School District

Steve Umber, director of transportation for the Placentia-Yorba Linda Unified School District, shows two of the six new buses that run on compressed natural gas (CNG).

In addition to 79 diesel and gasoline-powered buses, the district's fleet now includes four large CNG buses for home-to-school transportation and field trips to educational and athletic events, plus two smaller CNG buses to shuttle special education students to and from school.

"The South Coast Air Quality Management District (SCAQMD) fleet rules required alternative-fuel replacement buses, and with the funding offered for CNG buses and a fueling station, it made even more sense to begin the process of converting over from diesel," says Steve Umber, director of transportation for the school district. Mr. Umber heads the school district's Transportation Department of approximately 100 people - drivers, mechanics, instructors, dispatchers and supervisors.

Grants covered 80% of total start-up costs

The SCAQMD awarded approximately \$500,000 in grants, or 80% of the total costs, for the six CNG buses and on-site refueling station. The school district also chose CNG buses, Umber says, because they "have a proven history of safety," the selected CNG engines "are a good product," and the buses came from the factory instead of being retrofits, "which is an advantage because support and training from the engine manufacturer is critical."

He notes that his Southern California Gas Company Account Executive introduced the concept of CNG buses to the school district in 2000. "They guided us through the understanding of many safety and cost questions," Umber says. "In addition, when funding became available, the Account Executive assisted with Southern California Gas Company's role in providing new gas lines to the fueling system."

"Our drivers love these buses"

"Our drivers love these buses," says Umber. He describes the new buses as "clean and efficient," with power delivery that is surprisingly "quiet and smooth." "We've also received many compliments from site principals due to the reductions in smoke, diesel particulates and noise. Staff and parents also have given very positive comments about the lack of black diesel smoke and said they were happy to see 'clean-burning buses.'"

Umber's initial concerns about the costs of staff training and infrastructure were easily resolved. The bus distributor assisted with training the school district's mechanics, and the SCAQMD grants covered most of the cost of building a four-compressor, "time-fill" CNG refueling station.

"Time-fill system eliminates the downtime"

"The time-fill system eliminates the downtime spent in fueling lines since each bus is simply hooked up at the end of each day for an overnight fill," says Umber. "It's convenient for the drivers to start each and every morning with a fully fueled bus."

The district held a grand opening for the new fueling station in July 2002 that attracted officials from other school districts, environmental groups, SCAQMD representatives and other local dignitaries.

Umber noted in an October 2005 interview that "diesel fuel costs have doubled in the last 18 months, so running on CNG has reduced the cost per mile significantly."

Currently, there is no funding available to replace the newer diesel buses in the fleet, "but this district is looking forward to more CNG buses as soon as possible," Umber says. "There's more power with less mess and a better public impression. This district wants to go 100% CNG."

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