

Clean Energy

City of Burbank

CNG Fueling Station

Final Report

Contract #: MS08072
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Burbank, CA 91510

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Acknowledgements

Clean Energy thanks the Mobile Source Air Pollution Reduction Review Committee (MSRC) for their efforts that made this project possible.

This report was submitted in fulfillment of MSRC Contract# MS08072, City of Burbank CNG Station under the partial sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of July 2009.

Disclaimer

The statement and conclusions in this report are those of the contractor and not necessarily those of the Mobile Source Air Pollution Reduction Review Committee (MSRC) or the South Coast Air Quality Management District (SCAQMD). The mention of commercial products, their sources or their uses in connection with material reported is not to be constructed as either an actual or implied endorsement of such products.

Project Description

This contract provided \$376,964.41 in funding to offset the costs of constructing and building a private access CNG fueling station at 124 Lake Street, Burbank, CA. With the funding assistance from the Mobile Source Air Pollution Reduction Review Committee (MSRC), Clean Energy was able to develop an additional fueling infrastructure for the fleets in the South Coast Air Quality Management District (SCAQMD).

Clean Energy entered into an agreement to construct and operate a CNG station at 124 Lake Street, Burbank, CA. The station allowed the City of Burbank to fuel their dedicated refuse trucks. The site includes one (1) Compressor, and one (1) storage tank and thirty (30) time-fill post capable of fueling 30 heavy duty vehicles simultaneous, which dispense 292,186 GGE annually.

Clean Energy brings extensive experience in developing CNG infrastructure. Clean Energy is the only CNG station designer, builder and operator that manufacture our own equipment. Clean Energy prides itself on the knowledge that its customers have never missed a roll-out of their fleets. Our operations and maintenance technicians are all industry experts in their fields and are on-call 24-hours-a-day, 7-days-a-week.

Work Performed

Station construction started in May 2009 following approval of all site plans and acquisition of all necessary permits. Construction ran smoothly and concluded on July 9, 2009.

Task 1: Preliminary Documentation

CONTRACTOR shall submit a report (Pricing Report) demonstrating how the MSRC/AQMD's funding contribution will reduce the price that end users pay for CNG fuel on a DEG basis.

The Pricing Report was submitted on January 15, 2010. The pricing report demonstrates how the MSRC's funding contribution reduced the price that end users pay for retain CNG.

CONTRACTOR shall provide AQMD with copies of any subcontractor agreement(s) for fueling station construction prior to proceeding with project.

Clean Energy entered into a contract with H&K Mechanical for the construction of this facility; a copy of the contract was provided to the MSRC for consideration in April 2009.

Task 2: Construct and Operate CNG Fueling Station

CONTRACTOR shall install and maintain a new private access CNG fueling station at the CONTRACTOR'S site located at 124 Lake Street, Burbank Ca, as specified in Attachment 3, CNG Fueling Station Specifications. All equipment must be new and not previously used.

CONTRACTOR shall operate this station at the specified location for a minimum of five years from the date the station begins dispensing fuel. Beginning in the third year with the third year of station operation, CONTRACTOR shall dispense a minimum of 170,000 GGE of natural gas annually.

To meet the needs of the City of Burbank, Clean Energy designed and constructed a CNG station that includes (1) compressor, one storage capacity for fast filling vehicles, and thirty time-fill post capable of fueling vehicles simultaneously. The facility was completed and began dispensing fuel in July 9, 2009. Beginning the 3rd year of operation, the station had dispensed less than the originally projected, resulting in an annual throughput for the City of Burbank station approximately 15% less than the 170,000 gasoline gallon equivalents required, which resulted in a reduced grant reimbursement. However in the 4th year the station dispensed well over its 170,000 GGE requirement of CNG.

Task 3: Promotion

CONTRACTOR shall prepare and submit a proposed Public Outreach Plan to promote the MSRC's co-funding of the station to the media and/or community. Acceptable outreach may include, but not limited to, a Grand Opening/project kickoff event, press releases, or a press conference; The Public Outreach Plan shall automatically be deemed approved 30 days following receipt by AQMD staff, unless AQMD staff notify CONTRACTOR in writing of a Public Outreach Plan deficiency. CONTRACTOR shall implement the approved Public Outreach Plan in accordance with the Project Schedule below, notifying AQMD staff at least fourteen days prior to any outreach event.

The station was promoted in the media. See news release attached.

PROBLEMS ENCOUNTERED

Clean Energy did not encounter any problems relative to the design or construction of this project. We have designed numerous facilities of similar size and scope, the lessons learned on these projects have enabled us to design and build facilities more efficiently. The Clean Energy project team has many years of experience in the natural gas industry.

EMISSIONS BENEFITS

This project significantly reduced toxic air emissions while promoting the environmental improvement, domestic fuel savings, and economic opportunity stimulus goals of this funding program. Natural gas is the cleanest choice of fuel available today for this market. Natural gas powered vehicles produce up to 29% fewer greenhouse gas emissions^[1] than comparable gasoline models^[2].

^[1] "Detailed California-Modified GREET Pathway for Compressed Natural Gas (CNG) from North American Natural Gas" California Air Resources Board, January 12, 2009.

The project dramatically reduced on-road transportation emissions which are key contributors to poor air quality throughout California, South Coast and Paramount.

SUMMARY AND CONCLUSIONS

Clean Energy appreciates the support that has been provided by the Mobile Source Air Pollution Review Committee and South Coast Air Quality Management District for alternative fuel projects in the South Coast Air Basin. We suggest the continued support for funding projects that increase natural gas infrastructure, provide buy-downs for clean-fueled natural gas vehicles and fund technology advancement.

^[2] "Detailed California-Modified GREET Pathway for Ultra Low Sulfur Diesel (USLD) from average Crude Refined In California" California Air Resources Board, January 12, 2009.

PHOTOGRAPHS/OUTREACH







Article

City of Burbank Refuse Fleet Goes 100% CNG

The Southern California city's solid refuse fleet is now 100-percent CNG-fueled. While the move to CNG required an infrastructure capital investment, the benefits include lower fuel and maintenance costs, and reduced emissions.

January 2010, Government Fleet - Feature

by Shelley Mika - [Also by this author](#)

[2 Print](#)



The City of Burbank, Calif., fleet team includes (back row, l-r) Craig Van Item, Rex Richardson, Richard Benson, Richard Powell, Brian Orłowski, Jim Lawson, Johnny Stein, Alfred Johnson, Gary Rand, and Tim Smith; (front row) John Leai, Mike Muravez, Alex Healey, and Art Derakharian.

The City of Burbank, Calif., recently placed into service a new 2009 solid waste rear-loader collection truck powered by compressed natural gas (CNG). This small addition to the City's 485-unit fleet is significant as it completes the goal of a 100-percent natural gas-powered solid refuse fleet.

David Rodriguez, fleet superintendent, said the switch to CNG has been relatively easy, aside from the up-front costs. Each unit costs roughly \$65,000 more than diesel-powered vehicles, and a capital dollar investment is required to build the infrastructure for retrofitting repair shops and building fueling sites.

“The City’s stance has always been that we understand the technology costs money, and it’s our responsibility to use our money wisely,” Rodriguez said. “We feel it’s more prudent to pay extra initial capital outlay and give our citizens and geographical area better air quality.” Nestled between two major freeways and home to an airport and active train rail system, Burbank’s focus on emissions reduction is important to city leaders.

Immediate Payback Seen

The City is seeing immediate benefits from the use of CNG. With vehicles running all day, emissions reduction is significant. CNG costs about \$1 less per gallon than gasoline and diesel fuels, which means big savings for the City.

“Take a refuse truck that’s driving eight hours a day, five days a week, and gets about 5 miles to the gallon. That means a lot of savings, not only in the carbon footprint, but in dollars to us,” said Ari Omessi, assistant public works director.

With the switch to CNG, Burbank’s fleet has also realized reduced maintenance and repair costs.

“The CNG engine seems to be bulletproof,” Rodriguez said. “Other than oil changes, we’re not seeing any major component malfunctions.”

A surprising benefit has been the quieter-running CNG engines. This noise reduction is another benefit to the City and, in particular, its citizens.

“Diesel is noisy; these are whisper-quiet,” Omessi said. “Imagine the noise associated with a trash truck accelerating away from a stop or a sweeper cleaning streets. Most of these vehicles go out before 7 a.m., so the audible noise difference is a real benefit.”

Despite the advantages, complaints associated with CNG vehicles include frequent fueling. Because CNG takes up more tank space than conventional fuels, drivers must fuel up more often, a challenge when fueling sites are limited. However, the City has worked around this roadblock. Its vehicles are fueled on-site overnight, so every day, CNG units start with a full tank. Further, each truck is spec’d with tanks capable of holding 60 gas-gallon-equivalents (GGE), providing enough fuel for trucks to complete a day’s route without returning to the City site for fuel.