

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# MS08056, Port of Long Beach LNG Station. Work was completed as of June 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 \$400,000 in funding to offset the costs of constructing and building a public access LNG fueling station at 3400 I Street, Los Angeles, California. Clean Energy provided the remaining capital for this purchase, a total of \$1,048,975. 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 Clean Air Action Plan (CAAP).

Clean Energy partnered with the Ports to construct and operate an LNG station at 3400 I Street in Los Angeles. Each site selected for the proposed fueling network represents a strategic location for Port based operations and goods movement within the South Coast Air Basin. This station is located at the intersection of Anaheim and I Streets with the entrance and exit easements located on I Street. The site will include four (4) LNG dispensers, and two (2) 15,000 gallon storage tanks that are capable of dispensing the required 285,400 GGE annually.

Clean Energy brings extensive experience in developing LNG infrastructure. Clean Energy is the only CNG station designer, builder and operator that manufacture our own equipment. Clean Energy is North America's leader in clean transportation and has constructed numerous facilities of the size and scope developed for Southland Transit. 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 January 2009 following approval of all site plans and acquisition of all necessary permits. Construction ran smoothly and concluded on June 28, 2009.

Task 1: Preliminary Documentation

CONTRACTOR shall submit a report (Pricing Report): the Pricing Report shall also show how the MSRC funding contributes to competitive prices with traditional fuel.

The Pricing Report was submitted on January 27, 2009. The pricing report demonstrates how the MSRC's funding contribution reduced the price that end users pay for LNG.

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

Clean Energy entered into a contract with General Physics Corporation for the construction of this facility; a copy of the contract was provided to the MSRC for consideration on January 2009.

Task 2: Construct and Operate Station

CONTRACTOR shall install and maintain a new limited access LNG fueling station at 3400 I Street, Los Angeles, California. All equipment used to construct that facility was new.

CONTRACTOR shall operate this station at the specified location for a minimum of five years from the date the station begins dispensing fuel. Beginning with the third year of station operation, CONTRACT shall dispense a minimum of 285,400 GGEs of natural gas annually.

To meet the needs of the Clean Air Action Plan Fleets, Clean Energy designed and constructed a LNG station that includes (2) 15,000 gallon LNG storage tanks, requisite controls and (4) dispensers. LNG is trucked to the station. To offload fuel from the truck to the storage tank, we used a dedicated pump. This pump is dedicated to offloading from tanker to storage tank. The dispensers are capable of delivering an average of 30+ gallons per minute. The station is capable of providing up to 4,800 gallons per hour. The facility was completed and began dispensing fuel in June 2009. Beginning the 3rd year of operation, the station dispensed well over its 285,400 GGE requirement, 6.5 million DGE of LNG.

Clean Energy is committed to proper maintenance and operation of this facility. As a fuel provider, it is important that our stations enable customers to meet daily roll-out. Each Clean Energy station is constructed to allow for expansion as necessary by the facility users as demonstrated above relative to dispenser design.

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 is not limited to, a Grand Opening/project kick-off 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, notifying AQMD staff at least fourteen days prior to any outreach event.

Clean Energy shared a news brief on their website in July 2008 announcing the award by the MSRC to fund Natural Gas Fueling Stations. With the help of the MSRC Clean Energy was able to add new station infrastructure development to the Southern California Network. 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

Alternative fuel stations do not directly generate emission benefits. These benefits are created and derived by the vehicles that are able to meet daily-roll out as a result of having a reliable source of alternative fuel. This station provided a source of fuel for 100 LNG trucks with engines that were co-funded by a previous grant award from the MSRC's to Westport Innovations. Each gallon of LNG dispensed by this facility reduced our petroleum consumption by a ratio of 1:1.11.

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.

PHOTOGRAPHS/OUTREACH



