



Upgrades to the CNG Refueling Station In Fountain Valley

Contractor

Orange County Sanitation District

Cosponsors

Clean Energy

Project Officer

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Background

The South Coast Air Quality Management District (SCAQMD) issued RFP #P2004-09 to increase the number of publicly accessible alternative fueling stations in the South Coast Air Basin. Orange County Sanitation District (OCSD) partnered with Clean Energy, operating the largest number of public access compressed natural gas (CNG) fueling stations in the South Coast Air Basin to submit a response to the SCAQMD's proposal to upgrade its fueling station. OCSD's station was originally installed several years ago; thus, it still had first generation technology. Funding would offset the capital costs of installation new technology that would permit payment via credit card. OCSD's proposal was subsequently awarded, the subcontract to Clean Energy was executed, and construction commenced.

The completion of the upgrade at this facility owned by OCSD completed the SCAQMD's goal of a prior grant contract 02157 entered into with Clean Energy wherein all publicly accessible stations owned by Clean Energy at that time would be upgraded so that

payment by credit cards would be possible. This would ensure that owners and operators of natural gas vehicles (NGVs) could eliminate carrying numerous proprietary fueling cards in order to fuel with natural gas throughout the South Coast Air Basin. Natural gas fueling stations would then mirror traditional fueling stations.

Clean Energy's expertise in this type of equipment upgrade ensured a smooth transition for OCSD. Due to the amount of funding and capital available for this project, Clean Energy and OCSD entered into an agreement wherein Clean Energy would retain ownership of the public access dispenser and card reader, while the OCSD maintains ownership of the remaining equipment at the facility. Clean Energy provides operation and maintenance service for all equipment at this facility through a long-term agreement with OCSD.

Project Objective

OCSD's fueling station is strategically located off the 405 Freeway at the Euclid exit. This station is frequently used by taxi drivers such as those traveling to and from John Wayne Airport and throughout major cities such as the City of Irvine, Fountain Valley, Costa Mesa, Huntington Beach and Newport Beach. The objective of this project was to upgrade technology at a first generation natural gas fueling station so that NGV owners and operators could easily pay for fuel by using credit cards at the pump. Payment for fuel would include major credit

cards such as MasterCard and Visa, creating uniform fuel purchasing opportunities for natural gas users.

Technology Description

In 2002, Clean Energy was awarded an SCAQMD grant to upgrade all of its publicly accessible natural gas fueling stations in the South Coast Air Basin with card reader technology that mirrors the technology used at traditional fueling (gasoline/diesel) stations. The upgrade of this aspect of CNG fueling allowed for easier access for drivers of CNG vehicles. The public access component of this station utilizes storage, compression, piping and various other equipment of the private access station. In addition, the public access component includes a fueling island with dispenser and CRIND (card reader in dispenser) capable of accepting payment by credit card. The software component of this technology is continually reviewed and upgraded. The hardware component, the cabinet which houses the system, was also recently upgraded.



CNG Refueling Station

Status

This project has been successfully completed as of February 2005. The system was tested and accepted by the OCSA. Fueling transactions have commenced.

Results

Emission reductions resulting from the project are derived from a fueling convenience factor. The incorporation of using credit cards to purchase fuel mirrors the traditional fueling options at retail gasoline/diesel stations. Individuals who purchase natural gas vehicles will be able to purchase fuel at this location. This convenience will further assist in the marketing efforts to expand the use of natural gas vehicles by taxis, shuttles, and private consumers.

Benefits

Increasing the number of publicly accessible fueling stations that accept payment by credit card is mandatory to increasing the number of NGVs operated in the South Coast Air Basin. This station, conveniently located off the 405 Freeway, offers fueling for an NGV operator traveling through Orange County. Further, this station increases the support of the fleet rules implemented by the SCAQMD since taxi owner and operators will be able to utilize this facility.

Project Costs

The initial budget for this project was estimated to be \$80,000 with the SCAQMD's cost share being 30% or a maximum of \$24,000. This project was completed at a total cost of \$82,414.28. The SCAQMD's cost share of \$24,000 represents 29% of the final cost of the cost to provide public access.

Commercialization and Applications

The equipment at this facility has been tested, proven and is commercially available.

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