

Capistrano Unified School District

8/25/2022

**Capistrano Unified School District CNG
Station Fueling Expansion.**

Grant# MS18108

“Prepared for the Mobile Source Air Pollution Review Committee
(MSRC) under the AB 2766 discretionary fund work program.”

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 construed as either an actual or implied endorsement of such products.

Project Description & Work Performed

The purpose of the project was to design and install an additional 20 CNG slow fueling posts @3600psi to the original 2 compressors and 20 slow fueling posts that were already in use. The project was completed by August 2021 and operational September 2021.

A press release was issued August 2022.

Problems encountered

There were typical delays encountered due to the COVID-19 lock down and work force slow down. No actual construction or material issues were encountered once the project was started.

Emissions Benefits

6 Month Data Collection

	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20
Therms, as documented on utility bills	6797	13577	16006	10844	10952	13852
Gasoline Gallons Equivalent (calculated at 20 CNG therms = 8.32 GGEs, per CEC's energy almanac)	5655	11296	13317	9022	9112	11525
Miles traveled by combined 20 CNG vehicles (at approximately 5.5 GGE per mile)	1028	2054	2421	1640	1657	2095
Number of days vehicles driven	12	21	19	21	16	20
Particulate Matter (PM2.5) in lbs. displaced by combined 20 CNG vehicles (measured at 15 lbs per day)	1800	3150	2850	3150	2400	3000
Oxides of nitrogen (Nox) in lbs. displaced by combined 20 CNG vehicles (measured at 22 lbs. per day)	2460	4620	4180	4620	3520	4400

Analysis

The district has a total of 20 CNG Transit school buses. It is estimated that a single school bus consumes an average of 5.5 GGE per mile. Taking into account the combined total of all 20 buses, this project represents an estimated annual displacement of 119,850 of GGE gross polluting diesel fuel, 32,700 lbs. of particulate matter, and 47,600 lbs. of NOx, and the district continues to replace its petroleum- fueled vehicles with CNG vehicles.

Photograph and outreach

To promote the project and its completion, a press release was posted to our districts stakeholder community information webpage. <https://cusdinsider.org/capistrano-unified-school-district-receives-grant-for-cng-fueling-infrastructure-expansion/>.



Summary and conclusion

This project, funded by Mobile Source Air Pollution Reduction Review Committee through AB 2766 grant MS18108, has achieved its goals. The primary objective was to expand upon existing CNG fueling infrastructure. Capistrano Unified School District has a current fleet of 20 CNG transit buses in use. Annual tailpipe emission reductions of the 20 gross polluting diesel buses equate to an approximate annual displacement of 119,850 of GGE gross polluting diesel fuel, 32,700 lbs. of particulate matter, and 47,600 lbs. of NO_x, and the district continues to replace its petroleum- fueled vehicles with CNG vehicles.