Clean Transportation
Funding from the MSRC
Mobile Source Air Pollution Reduction Review Committee

Local Government Match Program 2011 Edition

FINAL REPORT

City of Santa Ana

MSRC Contract Number ML11041
AB 2766 Discretionary Fund Contract
Purchase of 7 LPG Heavy-Duty Vehicles
Retrofit 6 Heavy 6 Heavy-Duty Vehicles

CONTRACT PERIOD
September 7, 2012 – May 6, 2020

May 23, 2017

Prepared for the Mobile Source Air Pollution Review Committee (MSRC)
under the AB 2766 Discretionary Fund Work Program

CITY OF SANTA ANA
AB 2766/ML11041
Final Report

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 herein is not to be construed as either an actual or implied endorsement of such products."

Scope/Purpose and Background of Project:

On April 5, 2011, the City of Santa Ana Facilities, Fleet and Central Stores (FFCS) submitted an application to the Clean Transportation *Local Government Match Program 2011 Edition* seeking co-funding on two clean air projects.

- Purchase of seven heavy duty alternative fuel vehicles
- Retrofit of on-road vehicles with CARB Verified Diesel Emission Control Systems.

In September 2011, the South Coast Air Quality Management District (AQMD) Board approved $265,000 in funding. The contract number for this project is ML11041. Distribution of the award among the projects is as follows:

- Purchase of seven heavy duty LPG vehicles $210,00 (not to exceed $30,000 per vehicle)
- Installation of Level 3 verified after-treatment devices (including tax, delivery and installation) on on-road vehicles $55,000 (not to exceed $10,750 per device).

In June 2012, the Santa Ana City Council approved acceptance of the award and Contact ML11041 was forward to the City's legal department for signature. On September 7, 2012 the contract between the South Coast AQMD and the City of Santa Ana was executed.

Detailed description and analysis of the project:

Conventional-fuel powered equipment is replaced with Ford f-550 alternative fueled trucks. Liquified petroleum gas (LPG) is known to emit less carbon exhaust than diesel and it does not contaminate underground water resources. The seven heavy duty trucks were chosen to be replaced due to age, maintenance issues and to upgrade the City's equipment to a clean low carbon emission vehicles. The new replacement trucks were all propane powered vehicles that provides lower tailpipe emissions which reduces carbon footprint, lower greenhouse emission, lower maintenance as well as lower fuel cost by over $2.00 per gallon. Propane is extremely versatile as it provides clean low carbon emission, non-toxic fuel that won't contaminate soil or groundwater, making it safe to use. Propane is also readily available and portable.

The new vehicles have a better weigh carrying capacity and better mileage. The old vehicles were 30 gallons diesel or unleaded capacity vehicles with only an average of 10 miles per gallon; while the new ones have a 70 gallons propane capacity and averages 15 to 17 miles per gallon or more. The vehicles were initially bought with unleaded fuel capacity, prior to

delivery the tanks were converted into propane capacity fuel. CTEC provided the body up-fit to make it suitable for purpose of its usage whether as a sewer, maintenance or water vehicle.

Vehicle #58680 was a 1996 GMC PK 3500 full size 1-ton utility vehicle used by PWA Sewer Services. The odometer at time of disposal was 70,724. This vehicle was replaced by a 2011 Ford F550 SD Propane with a fuel capacity of 70 gallons propane. It was put on service in 2014

Vehicle #58969 was a 1999 Diesel Ford F450 Stake truck, full size 1 ton, used by PWA Street Trees, mileage was 75,968. This vehicle is replaced by a 2014 Ford F550 SD Propane.

Vehicle #58515 was a 1995 Ford F450, diesel heavy duty, used by PWA Street Trees. It was acquired on 3/28/1995 and has 91,180 miles at time of disposal. This vehicle was replaced by vehicle #59952 a 2013 Ford SD F550 vehicle.

Vehicle #58988 was a 2000 Ford F450 Utility vehicle, full size 1-ton truck used by PWA Water Systems Maintenance. It was a diesel truck with 45,596 miles at time of disposal. This vehicle was replaced by vehicle #59953 a 2013 Ford Super Duty F550.

59237 was a 2000 GMC 3500 HD Utility full size 1 ton truck, used by PWA Sewer Services. It was acquired on 7/25/2000, a diesel truck with 30 gallon fuel capacity and average of 10 miles per gallon. At time of disposal it had 36,991 miles. Replaced by 2013 Ford SD F550.

59287 was a 2001 Ford F350 full size 1 ton truck used by PWA Water Systems Maintenance, it was acquired on 5/1/2001 and uses unleaded gasoline with a fuel capacity of 28 gallons and average mileage of 10 miles per gallon. At time of disposal it had 71,282 miles. Replaced by vehicle #59993 a 2015 Ford F550 SD.

59288 was a 2001 Ford F350 full size 1 ton truck used by PWA Water Systems Maintenance, it was acquired on 5/1/2001 and uses unleaded fuel with 30 gallons fuel capacity and 10 miles per gallon average miles. Replaced by 59994 a 2015 Ford F550 SD.

Six heavy duty diesel trucks that are imperative to daily operations, including dump, cement and water trucks, have been given an overhaul through the installation of California Air Resources Board (CARB) Level 3 retrofits, which reduce the level of exhaust or soot by 85%. Diesel equipment generates a high level of carbon emissions, resulting in contamination of the air stream. The City explored the option of replacing the trucks with alternative-fueled equipment. After review, it was determined that the installation of emission reduction devices was the most economical and feasible approach to the improvement of air quality in the area.

These two environmental transportation projects are part of a larger Green Facilities, Fleet Management and Central Stores Strategic Plan that is designated to transform 75 to 80% of the City's fleet of over 900 vehicles into a line-up of cars, trucks and equipment powered by sustainable and renewable energy sources. Gaining support from MSRC, the City of Santa

Ana is able to implement strategies that will cut fuel costs, improve air quality and benefit the health and welfare of our community.

Issues during the project:

Due to the City of Santa Ana's conservative approval process, the execution of the contract between the AQMD and the City took several months. During this period, Facilities, Fleet and Central Stores staff moved forward on the projects. The up-fit and conversion from unleaded to propane truck took a little longer than expected as well.

Summary:

Overall, the project was worthwhile and will save the City maintenance and fuel cost in the long run not to mention the environmental benefits as a result of using more cleaner and fuel efficient vehicles.


SANTA ANA
59288


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LIFTMOORE
ROUSH
DRIVING FOR A GREENER TOMORROW
Powered by Propane Autogas
59906
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