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Staff Report

Study Session
Item # 4

To: Lemoore City Council
From: Lauren Apone, Administrative Analyst
Date: September 29, 2008
Subject: Compressed Natural Gas Vehicles

Discussion:

Compressed Natural Gas (CNG) is a practical, inexpensive, and environmentally friendly fuel. For these reasons, staff has looked into this alternative fuel to power some of the City vehicles.

One of the drawbacks of CNG vehicles is the limited infrastructure for fueling them. The nearest CNG filling station is owned by Kings County and is located in Hanford. This fueling station is a fast-fill station and vehicles can fill up in 15-20 minutes. Refuse vehicles that travel to the Materials Recycling Facility in Hanford multiple times per day are the logical choice for CNG conversion. Refuse vehicles also accumulate the most miles per year and would have the greatest emissions reduction and cost saving benefits.

CNG is currently selling at between \$2.25 and \$2.75 per gallon equivalent. The cost for a CNG refuse vehicle is approximately \$30,000 more than a comparable diesel vehicle. In order to maintain these vehicles, the shop will need to install natural gas detectors and exhaust fans so the vehicles can have maintenance performed indoors. This will be a one-time cost of approximately \$50,000.

Currently, refuse vehicles drive approximately 15,000 miles per year and consume approximately 6,000 gallons of diesel per year. Assuming \$5.00/gallon diesel prices, The City pays an average of \$30,000 per refuse vehicle per year for diesel. Taking an average price of \$2.50/gallon for CNG, the extra cost of the CNG vehicle will be made up in 2 years.

Staff is looking into replacing vehicles with CNG vehicles when they are due to be replaced as opposed to converting the fleet all at once. Once the City of Lemoore has multiple CNG vehicles or they wish to convert trucks that are not refuse trucks to CNG, it may warrant the installation of a CNG filling station in Lemoore. A slow-fill station will cost approximately \$200,000 to install and the City may be able to use Congestion Mitigation and Air Quality (CMAQ) grants to help pay for the installation. The High School is also looking into a fueling station in Lemoore when they consider CNG school buses.

Budget Impact:

CNG refuse vehicles will cost approximately \$30,000 more per vehicle and there will be a one-time shop upgrade of approximately \$50,000. Fuel savings would amount to approximately \$15,000 per year per vehicle.

Recommendation:

Information Only