

Mayor
William Siegel
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Council Members
John Gordon
Eddie Neal
Willard Rodarmel



**Public Works
Department**

711 West Cinnamon Dr.
Lemoore, CA 93245
Phone (559) 924-6735
Fax (559) 924-6708

Staff Report

Item # 6

To: Lemoore City Council
From: Lauren Apone, Administrative Analyst *LA*
Date: March 11, 2013
**Subject: CNG Station – Six Month Update/Authorization to Bid – CNG
Vehicles/Revised Vehicle List for Air District Grant/Helen Putnam
Award Application**

Discussion:

The CNG Station jointly owned by the City and the four area school districts has now been in operation for six months. This update report will address the finances of the station, City's use of CNG, vehicle use, and future CNG plans. If any Council Member wishes to tour the CNG station or has any questions about this report, please contact Lauren Apone.

Station Usage

The CNG Station has been used in the past 6 months by the City's CNG vehicles, including the front loading refuse truck and the street sweeper, Lemoore Area Schools Transportation's (LAST) 9 CNG school buses, KART buses, and members of the general public with CNG vehicles. The City and LAST utilize the time-fill part of the station where the vehicles hook up to the filling posts when they are done for the day and a timer turns the compressors on and fills up the vehicles overnight when electricity rates are lowest. The other users utilize the fast-fill portion of the station which is similar to a regular gas station where you get gas within minutes. The station takes major credit cards as well as our own fleet card.

The following is usage at the CNG Station through February 28, 2013:

| <u>User</u> | <u>Gallon Equivalents (GE)</u> |
|-----------------|--------------------------------|
| City of Lemoore | 1,876 |
| LAST | 9,815 |
| KART | 1,902 |
| Public Use | 1,057 |
| Total | 14,650 |

Station Finances

The original Memorandum of Understanding (MOU) between the City and the districts states the four components that would make up the price of CNG sold at the station, including the natural gas itself, electricity used to run the equipment, preventative maintenance costs, and major maintenance costs. The MOU dictates that the gas, electricity, and major maintenance set-aside costs will be apportioned based on usage. The monthly preventative maintenance costs were to be split equally each month between the City and school districts, after subtracting out the contribution to this component of \$0.15/GE from the other users of the station. This different contribution for the monthly maintenance expenses was to encourage both the City and LAST to increase their CNG fleet faster, to spread the monthly maintenance expenses among a larger amount of fuel. At the time the MOU was negotiated, the City had no CNG vehicles and LAST had only one.

The City's cost for fuel over this six month period was approximately \$2.34/GE, all inclusive of gas and electricity costs, preventative maintenance, and maintenance set-aside fees. The City can anticipate that this price will go down to around \$2.00/GE as we add more CNG vehicles to our fleet and distribute the maintenance costs over more GEs.

In addition, the federal government recently extended a \$0.50/GE rebate for CNG, retroactive through all of 2012. When this money is received, it will go into our maintenance set-aside account as spelled out in our MOU. This will decrease the City's and LAST's contribution to the set-aside account and will lower the price of fuel. The maintenance set-aside account currently has \$3,200 after spending approximately the same amount to keep a spare parts inventory onsite.

As planned, City and LUHSD staff will evaluate our pricing to determine if our initial predictions of gas, electricity, and maintenance costs per GE were accurate and adjust any prices if necessary. At this time, it looks as though any price adjustments will be in the downward direction.

Vehicles

The City planned from the beginning to only replace our conventional diesel vehicles with CNG vehicles as it came time to replace the diesel vehicle anyway. This led to the replacement of a rear-loading refuse truck with a front-loading refuse truck (which included additional operational changes discussed below) and our diesel street sweeper with a CNG street sweeper because their diesel counterparts reached the end of their life. These vehicles are not necessarily the vehicles that would show the greatest CNG savings (i.e. – the street sweeper only operates every other week) because they are not used as much as our side-loading refuse trucks. However, our side-loader trucks were not in need of replacement at the time.

Our new CNG vehicles were not without problems. The front-loading refuse truck has been up in Fresno for warranty repairs approximately 7 times, for problems related to: transmission, malfunctioning back-up camera, malfunctioning windows, coolant leak, air conditioning ductwork, and a hydraulic hose. The street sweeper operated without incident for about 6 months and then caught fire. The Kings County Fire Department, Elgin, Freightliner, and Haaker (all three involved in the original assembly and sale of the

vehicle) conducted an investigation and determined that the cause of the fire was a malfunctioning solenoid that sliced through a hydraulic line. The manufacturer has towed the vehicle back to its shop for repair and has provided the City of Lemoore with a no-cost loner vehicle until repairs are made.

For both of these vehicles, the reliability issues were independent of the type of fuel they use.

Refuse Operations

The front-loading refuse trucks was chosen to replace a rear-loading refuse vehicle because it is able to be operated by only one person and pick-up larger dumpsters, creating operational and labor savings in the long-term. Prior to purchasing the front-loader, staff from the Refuse Division rode in a similar front-loading refuse vehicle from the City of Visalia (who has a fleet of CNG refuse vehicles) to determine its potential use in Lemoore. It was determined that the front-loader was significantly larger than the rear-loader and had some operational limitations. Staff knew that replacing our entire fleet of rear-loaders with front-loaders was not feasible, but that they could certainly serve a purpose in Lemoore. In order to make this migration, dumpsters had to be retrofitted and routes needed to be changed so that the front-loader would be able to operate most efficiently. The Refuse Division ran into some challenges getting the dumpsters ready on time for the vehicle delivery, and so the front-loader was not used to its capacity during the first few months.

Future Steps

The City currently has several grants that require action in the coming months. First, the City has approximately \$715,000 remaining of a \$1,000,000 CMAQ grant awarded in late 2010 for the purchase of CNG vehicles. In order to keep this grant current, the City must expend money and invoice Caltrans by August, 2013. If we do not invoice, the money will be de-obligated and taken away from the City. Federal Highways Administration (FHWA) rules require invoices once every 12 months to keep the project active. However, we do not need to expend the entire amount until June of 2015. In addition, since this grant was acquired in 2010, FHWA has changed the rules for CMAQ money and vehicle purchases. The City has been grandfathered in on this project which allows the entire cost of the CNG vehicle to be reimbursed 100%. Any future CMAQ grants will only pay for the incremental cost between a diesel vehicle and a CNG vehicle, which is approximately \$30,000. In addition, if we do not send Caltrans an invoice by August, the project will go on the inactive list and we will lose our grandfathered status. KCAG has reviewed the above information and determined it to be accurate.

Staff proposes that we purchase two CNG side-loading refuse trucks with this CMAQ project and stagger their delivery so we will receive one this year and once next. We propose to pay a deposit on the first vehicle in order to invoice Caltrans by August. The Fleet Department and Refuse Division have worked together to identify the need for this new vehicle and to write the specifications. Refuse staff is scheduled to drive a demonstration vehicle through routes in Lemoore in the near future.

Staff had also applied for a grant through the San Joaquin Valley Air Pollution Control District for new alternative fuel vehicles. In December 2011, Council approved the following list of vehicles, each with a \$20,000 contribution from the SJVAPCD.

| Department | Purpose | Proposed Vehicle type | Proposed Vehicle Cost | Grant Amount | Asset Replacement Cost |
|---------------------|--|-----------------------|-----------------------|-------------------|------------------------|
| Police | Personal Transportation Vehicle to patrol the high school and parking lots | Electric | \$9,000 | \$ 9,000 | \$0 |
| Police | VIP Vehicle | CNG Sedan | \$29,000 | \$20,000 | \$9,000 |
| Water | 2 Personal Transportation Vehicles for meter readers | Electric | \$16,000 | \$16,000 | \$0 |
| Public Works | Van Replacement | Hybrid Sedan | \$30,000 | \$20,000 | \$10,000 |
| Building Inspection | Pick-up replacement | CNG Sedan | \$29,000 | \$15,000 | \$14,000 |
| Fleet | Forklift | Electric | \$35,000 | \$20,000 | \$15,000 |
| | | | TOTAL | \$ 100,000 | |

The grant was awarded on a first-come first-serve basis and we have recently been told our funding will be coming through in the next month. However, the SJVAPCD has changed the eligibility of some vehicles and hybrids and forklifts are no longer eligible. Staff recommends that we replace those vehicles in our grant application with 2 CNG Ford Transit Connect vans. One will replace a pick-up in the Water Department and the other will be used to replace the Public Works van. These vehicles are each approximately \$38,000, which would require a \$18,000 match from each department.

As part of receiving the funding, staff was required to get new quotes for all of the proposed vehicles. Some costs increased, and some decreased. In addition, staff reevaluated the need for a new CNG sedan in the Building Inspection Department, and the Police Department has expressed interest in having two CNG sedans for the VIPs instead of the one they previously requested. Below is the revised proposed vehicle purchase list. All matching funds will be included in the 2013/2014 budget.

| Department | Purpose | Proposed Vehicle type | Proposed Vehicle Cost | Grant Amount | Asset Replacement Cost |
|--------------|--|-----------------------|-----------------------|-------------------|------------------------|
| Police | Personal Transportation Vehicle to patrol the high school and parking lots | Electric | \$9,000 | \$ 9,000 | \$0 |
| Police | 2 VIP Vehicles | CNG Sedans | \$54,000 | \$34,000 | \$20,000 |
| Water | 2 Personal Transportation Vehicles for meter readers | Electric | \$17,000 | \$17,000 | \$0 |
| Public Works | Van Replacement | CNG Van | \$38,000 | \$20,000 | \$18,000 |
| Water | Pick-up replacement | CNG Van | \$38,000 | \$20,000 | \$18,000 |
| | | | TOTAL | \$ 100,000 | \$56,000 |

Helen Putnam Award

Staff would like to nominate the CNG Station for the League of California Cities Helen Putnam CCS Partnership Intergovernmental Collaboration Award. The cooperation between the City and the four school districts on this project is very rare. We think it will make for a very competitive application. There is no cost for this application and it should take minimal staff time to complete.

Budget Impact:

The Refuse fund paid \$2.34/GE for 1876 GEs of CNG over this six month time frame, for a total of \$4,390. The same amount of diesel gallons at \$4.09/gal (average diesel price City has paid over last 6 months) would have cost \$7,673, saving the Refuse Division \$3,282 over these past 6 months.

If the City purchases a CNG side-loader, the fuel savings are expected to be approximately \$8,500 annually per vehicle.

Recommendation:

Staff recommends that:

1. Council authorize staff go out to bid for two CNG side-loading refuse vehicles with staggered delivery, with a deposit to be paid and invoiced to Caltrans by August 2013.
2. Council approve the revised vehicle list for the SJVAPCD Public Benefit Grant.
3. Council direct staff to apply for the Helen Putnam Award for the CNG Station project.