

TO: Mark Kunkle

FROM: Diane Conrad

RE: 2014 CNG ROI (*Preliminary*)

DATE: December 31, 2014

As per your request, following is the analysis to date of the costs of the CNG police vehicles. As you recall, the first Tahoe was up fitted in May 2013. Two additional vehicles were up fitted in January 2014. We have received grant funding to cover two of the three conversions. So, at the end of this year, we will have our first full year of data which will be used in the 20 year analysis. Please accept this report as a preliminary, and I will update once invoices are in through the end of December.

Other items of note:

- The Tahoes are averaging about 72% CNG/gasoline usage. I anticipate this will improve as fueling options expand & we are over the acclimation curve with all officers.
- CATA's administrative fee went from \$.25 to \$.30 in August.
- CATA's construction work this coming year may result in a temporary inability to fuel from their line. Depending on other yet to be identified location(s) of similar cost, we may not realize the savings in 2015 as we did in 2014.

That said, this always was a long term savings initiative, and I believe that will still be realized.

To date in 2014, we have spent \$3,685.28 for 3,377.56 GGE of CNG between January & October. The breakdown is as follows:

	Cost	# GGE or Gallons	Avg Cost/gal
CATA	\$3,252.32	3266.102	\$1.00
UniMart	\$432.96	111.46	\$3.88
	\$3,685.28	3377.562	

If we were to have used gasoline, @ \$2.8646/gallon¹, the cost would have been \$9.675.36. Therefore, for the first 10 months of the year, we saved **\$5,590.08** on fuel costs.

So, we are just over the break-even point for gas savings vs the cost of up fitting on each vehicle with fifty percent grant reimbursement. If grant funding is not available, then the cost benefit is moved out several years.

¹ This is the actual price from invoices, not the contract price, which is higher (listed in range of \$3.045-3.127).

This fuel savings, in addition to the benefits of the larger vehicle for better organization and access to necessary equipment, officer comfort, as well as the environmental/ecological benefit, supports the initial cost savings proposal and should be continued.

However, CNG at UniMart is currently more expensive than the Township price for gasoline. Therefore, if gas prices stay low, I recommend switching to gasoline in the short term for the Tahoes if CNG cannot be obtained at CATA or another location where the cost is significantly lower than that of gasoline. I am hopeful that will not be the case, and will attempt to identify an alternate fueling location.

Using the gasoline fueling report from PW covering the period from January 1 thru December 17, 2014, FT-1 is not even included as has only run on CNG, FT-3 has realized 32 MPG & FT-11 55 MPG. The other (non CNG) vehicles ranged from 10.8 to 12.3 MPG.

I have also attached an article from Law and Order Magazine's November issue. The last line sums up the results of the most recent tests on the 2015 police vehicles.

As for which vehicle to purchase in 2015, the Tahoe is still the patrol vehicle of choice. Our actual costs are still well under that projected in the initial ROI, and for the reasons stated above, as well as the assumption that CNG purchased at government rates will still always be lower cost than gasoline, it makes good business sense to continue purchase of bi fuel CNG vehicles. Given the size of the CNG tank and the equipment we carry, the only GMC police vehicle that currently fits the bill is the Tahoe.