

August 1, 2013

Dear Commissioners:

We appreciate the opportunity to offer follow-up comments on Docket Number:13-057-02, the docket opened as an outcome of SB275, Energy Amendments, passed in the 2013 Utah Legislative session.

We have been impressed with the quality and breadth of initial comments that your office has already received. Clearly, this topic is of considerable import in Utah, both because of the severity of our air pollution challenges and because this legislation calls for investing scarce public dollars in solutions.

We hope that our initial comments were useful and clear – obviously we believe that those classes of Alternative Fuel Vehicles which aren't CNG vehicles have been relatively neglected in Utah, despite the fact that, in many cases, they offer a superior return on the public investment dollar when it comes to air pollution reductions. In these reply comments, we wanted to offer several clarifying remarks.

1. First, we wanted to highlight data offered by Questar (<http://www.psc.utah.gov/utilities/gas/13docs/1305702/245341Comments%20of%20QGC%207-3-2013.doc>) in its comments. When it comes to the cost of fueling stations, the gas company notes:

*Rural stations generally cost between \$500,000 and \$1 million to construct and between \$20,000 and \$75,000 a year to operate and maintain. Urban stations cost more; between \$750,000 and \$1.4 million to construct and between \$25,000 and \$150,000 a year to operate and maintain.*

Those figures – which we assume to be accurate, since Questar itself has built and operated these stations – are higher than the data that we cited in our original comments, and others tend to cite as well. We quoted Forbes as suggesting that such stations cost “about \$750,000,” which turns out to be a rather low estimate. In addition, we failed to note the reality of ongoing annual maintenance costs, which can cost more than \$100,000 per year.

Those higher numbers – which appear to be more specific to Utah and therefore more accurate – make one of the points that HEAL and others offered even stronger: CNG vehicles require a much costlier infrastructure to fuel them than other AFVs, whether EVs or Clean Diesel.

Despite that considerable cost difference, it's worth again pointing out that when it comes to CNGs vs. EVs, Utah already has one of the most-developed infrastructures for fueling natural gas vehicles. See the below map from 2009:



Source: <http://www.ops.fhwa.dot.gov/publications/fhwahop10024/sect3.htm>

The most up-to-date data is gathered by the federal government's Alternative Fuels Data Center ([http://www.afdc.energy.gov/fuels/natural\\_gas\\_locations.html](http://www.afdc.energy.gov/fuels/natural_gas_locations.html)) Below is a current map of just the Mountain West region, showing the relative preponderance of CNG stations here:



As has been pointed out numerous times, Utah is already a leader when it comes to supporting CNGs – even before SB275. How do we compare when it comes to supporting EVs – a superior pollution control vehicle?

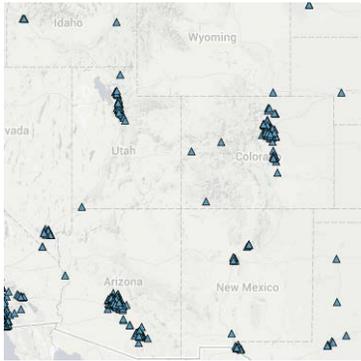
Not well.

Here's a map from 2012 which also uses federal AFDC data:



Source: AFDC data analyzed by <http://carwoo.com/blog/electric-vehicle-charging-stations-and-your-state/>

The up-to-date regional snapshot of EV charging stations from the AFDC site tells a similar story that Utah lags when it comes to supporting EVs ([http://www.afdc.energy.gov/fuels/electricity\\_locations.html](http://www.afdc.energy.gov/fuels/electricity_locations.html))



2. We also believe data on the cost of a CNG fueling station challenges the gas company's own analysis of how long it takes CNG buses to "pay back" their initial considerable investment.

Questar interestingly used the same study that HEAL did to examine the relative cost-effectiveness of CNG buses vs. other clean alternatives, namely Clean Diesel buses: the 2012 report from MJ Bradley & Associates entitled "Clean Diesel versus CNG Buses: Cost, Air Quality, & Climate Impacts." [http://www.catf.us/resources/publications/files/20120227-Diesel vs CNG FINAL MIBA.pdf](http://www.catf.us/resources/publications/files/20120227-Diesel%20vs%20CNG%20FINAL%20MIBA.pdf)

MJ Bradley concludes that while CNG buses cost much more than Clean Diesel buses (the two are comparable in terms of emissions), fuel for the former costs quite a bit less, such that eventually natural gas vehicles justify their higher price-tag in "between five and eight years."

Questar builds off MJ Bradley's analysis, but argues that since CNG in Utah is much cheaper, "the payoff happens more quickly...in less than 2 ½ years." However, we believe the gas company may have made one critical error: It relies upon the MJ Bradley estimates for the per-bus cost of the fueling infrastructure, one of the costliest pieces of CNG buses. On p. 5 of the MJ Bradley report, in a footnote, it explains how the report authors arrived at an estimate of a cost of CNG fuel station construction of "\$25,800 per bus." Namely, the authors assume a total price tag of \$1.25 million to build the bus-fueling CNG station, plus "a fleet of 150 buses."

The Questar analysis later notes that UTA currently has 24 CNG buses on order.

That much smaller fleet of UTA buses would imply a per-bus fueling station cost of perhaps five to six times that estimate of \$25,800 per bus.

HEAL doesn't have access to UTA or Questar's internal calculations, and so can't precisely quantify what it would cost the agency to shift more aggressively towards CNG buses. However, from looking at the data from MJ Bradley and Questar itself, we are definitely skeptical of the gas company's Pollyannaish estimate of "less than 2 ½ years" and would urge the Commission to scrutinize the data behind those optimistic scenarios.

Thanks again for the opportunity to offer reply comments on Alternative Fuel Vehicles in Utah. We look forward to continuing to offer input as this valuable process moves forward.

Sincerely,

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