Docket 13-057-02

Initial Comments of the Utah Office of Consumer Services

Introduction

During the 2013 legislative session, the Utah legislature passed SB275, which initiated a Utah Public Service Commission (Commission) proceeding as follows:

> Section 2. Section **54-1-13** is enacted to read:
> **54-1-13. Commission exploration and development of cleaner air options.**
> (1) The commission shall immediately initiate and conduct proceedings to explore and develop options and opportunities for advancing and promoting measures designed to result in cleaner air in the state through the enhanced use of alternative fuel vehicles, including:
> (a) consideration of the role that gas corporations should play in the enhancement and expansion of the infrastructure and maintenance and other facilities for alternative fuel vehicles;
> (b) the potential funding options available to pay for the enhancement and expansion of infrastructure and facilities for alternative fuel vehicles;
> (c) the role local government, including any local government entity established for the purpose of facilitating conversion to alternative fuel vehicles and of promoting the enhancement and expansion of the infrastructure and facilities for those vehicles, can or should play; and
> (d) the most effective ways to overcome any obstacles to converting to alternative fuel vehicles and to enhancing and expanding the infrastructure and facilities for alternative fuel vehicles[1].

Subsequent to the legislative session, the Commission opened docket 13-057-02 "In the Matter of the Investigation Required by SB 275, Energy Amendments, Addressing Cleaner Air Through the Enhanced Use of Alternative Fuel Vehicles." The Commission established a schedule within that docket wherein interested participants submit initial comments by July 3, 2013 and allowing reply comments on August 1, 2013. The Utah Office of Consumer Services (Office) submits these comments accordingly.

The Office offers these comments from the perspective outlined as its statutory duties. Specifically, the Office has the responsibility to assess the impact of utility rate changes and other regulatory actions on residential and small commercial customers and to advocate a position most advantageous to these classes of customers[2]. The Office focuses its comments on the questions posed in the legislation as well as the appropriate role for the utility regulatory process in general and the

[1] Excerpted from S.B. 275, for complete text see: http://le.utah.gov/~2013/bills/sbillenr/SB0275.pdf
[2] See Utah Code 54-10a-301. (1) (a) and (c).

Commission specifically to promote measures that result in the greater use of Alternative Fuel Vehicles (AFV) to meet clean air objectives. Our comments are organized as follows:

- A brief overview of the scope of AFV;
- A discussion of the appropriateness of using public utility rates to promote AFV;
- An outline of policies and funding mechanisms that would better enhance the use of AFV;
- A suggested policy approach to determine the best options for improving Utah's air quality; and
- An explanation why utility rates should be based on the fundamental principles of cost effectiveness and cost causation.

Finally, the Office concludes with its direct response to the four issues identified in the legislation (see line 70 to 81 quoted above) and specific recommendations for the Commission and for other policymakers.

Alternative Fuel Vehicles: An Overview

Although SB 275 and discussion in Utah in general have focused on natural gas vehicles (NGV), the full spectrum of alternative fuel vehicles is much broader. According to the U.S. Department of Energy Alternative Fuels Data Center, alternative fuel vehicles include the following:

- Biodiesel (see: http://www.afdc.energy.gov/fuels/biodiesel.html)
- Electricity (see: http://www.afdc.energy.gov/fuels/electricity.html)
- Ethanol (see: http://www.afdc.energy.gov/fuels/ethanol.html)
- Hydrogen (see: http://www.afdc.energy.gov/fuels/hydrogen.html)
- Natural Gas (see: http://www.afdc.energy.gov/fuels/natural_gas.html)
- Propane (see: http://www.afdc.energy.gov/fuels/propane.html)

In addition, several emerging fuels are considered alternative fuels under the Energy Policy Act. The Alternative Fuels Data Center provides an introduction to each of these fuels, along with information about benefits and considerations, fueling stations, vehicles using each fuel, and laws and incentives applicable to each fuel. The Office will not replicate such information here, but provides links to each page above to facilitate the convenient access to this information.

The Office asserts that an essential component of the evaluation contemplated by S.B. 275 is a comparison of the performance, benefits and challenges associated with each type of AFV. We anticipate that agencies or entities with appropriate expertise will submit information comparing different types of AFVs. However, we are concerned that the comparisons provided will be cherry-picked and less than comprehensive. For example, it would be easy to note that a new CNG[3] bus or passenger vehicle has a better emissions profile than the existing fleet of older diesel-fueled buses or gasoline-powered passenger vehicles. A more appropriate comparison would include the emissions profiles of all potential options for new vehicles. In the case of buses, new cleaner diesel technology should be in the evaluation. In the case of passenger vehicles, it would be appropriate to examine the range of profiles for new gasoline-powered vehicles as well as the range of available AFV. The Office provides the following examples why more comprehensive comparisons are necessary to evaluate the potential benefits of different types of AFV:

- Comparisons of new NGV buses to the existing fleet of buses may be misleading. Many sources[4] indicate that new cleaner diesel buses have as good as or better of an emissions profile than new NGV buses.
- Comparisons of new NGV passenger vehicles may also be misleading. An examination of the emissions profile of various Civic models shows that the EV is much cleaner and one gasoline-fueled model is in the same general emissions category ("bin 2" under the existing EPA designations) as the Civic CNG model[5].
- If the EPA's proposed Tier 3 standards are implemented this level of emissions will become the average standard for passenger vehicles[6].
- It is not clear whether EV or NGV is the better long-term solution for passenger vehicles[7].

[3] The Office notes that it will typically refer to NGV, or natural-gas vehicles, for the general category of AFV. However, the Office at times may reference the specific technology used such as CNG (compressed natural gas) or LNG (liquefied natural gas.)
[4] See, for example, New York City Transit's presentation entitled "Comparison of Clean Diesel Buses to CNG Buses" http://www1.eere.energy.gov/vehiclesandfuels/pdfs/deer_2003/session5/deer_2003_lowell.pdf
[5] To compare specific models, see http://fueleconomy.gov/feg/findacar.shtml
[6] For more information, see http://www.epa.gov/otaq/tier3.htm
[7] See, for example, http://www.forbes.com/sites/michaelkanellos/2012/01/11/which-are-better-electric-cars-or-natural-gas-vehicles/2/#

Commission involvement in AFV would normally be quite limited. Any proposed rates and terms of service for EV would be subject to a utility commission's review and approval. In some states, the natural-gas utility does not provide NGV service. In others, such as Utah, the utility has an NGV rate that must be approved by the Commission. It should also be noted that natural gas plays a role in some AFV, as it is a fuel input into gas-fired electric generation and an input into certain other AFVs, such as some types of hydrogen vehicles.

Utility rates are an inappropriate funding source for AFV or any other air quality solutions

To the extent that public utilities provide any services related to AFV, the rates should be set at full cost of service. Subsidizing any development of AFV through public utility rates is not consistent with good public policy. The Office submits that the mandated subsidies for NGV within Questar Gas Company's (Questar) rates is contrary to the public interest for the following reasons:

- ***Anti-Competitive***: Maintaining subsidized, below cost rates for NGV service provided by the utility is anti-competitive and impedes the development of a market for CNG fueling stations. Further, when natural gas rates are loaded down with subsidies, this could impact the development of other AFV possibilities in the case of technologies that utilize natural gas as an input.
- ***Negative Economic Impacts***: Including these subsidies in rates will have a negative impact on economic development. Low utility rates are consistently cited as an important factor in recruiting new business to Utah. Further, the low utility rates are an important consideration for local firms that use natural gas to operate equipment, heat buildings and provide services.
- ***Disproportionate Customer Impacts***: Raising rates for non-utility services has a disproportionate impact on those customers least able to afford it, specifically the low income and fixed income customers.
- ***Ignores the Cost Advantage***: The natural cost advantage of natural gas is significant enough to render additional subsidies unnecessary. Currently, the price at the pump for CNG is $1.49 per gasoline gallon equivalent. According to information provided in Questar's July 1, 2013 general rate case filing, a full cost of service rate would be approximately $1.70 per gallon equivalent, which is less than half of the price of "regular" gasoline at the time of this

writing. It is difficult to understand why a product that enjoys such a significant cost advantage would need additional subsidies.

Some proponents of the use of public utility subsidies point out the relatively minimal impacts on the average customer. However, even small impacts add up. More importantly, growth and economic development in Utah is causing Questar to make new investment in plant and infrastructure, including a large pipeline infrastructure replacement program, which results in upward pressure on rates.

Other proponents claim that an offsetting program to assist low-income customers could provide any necessary solution to inequities created from rate subsidies of AFV development. However, it is important to remember that low-income customers are not a discrete set. Rather, income levels are on a continuum and, for every customer who would qualify for a low-income program, there are several more who make just a few too many dollars to qualify. There are also many fixed income customers who may not be low income, but whose modest income is eroded each time that additional costs are loaded into their necessities, such as utility costs. Further, some of our larger commercial and industrial customers use large quantities of natural gas. Even small cost increases multiplied by their usage results in input cost increases that could translate into significant impacts on their business profitability.

For the reasons cited above, public utilities should focus on providing utility service not AFV or other non-utility products. Consumer advocates nationally have recognized the potential conflicts associated with less than cost of service rates for NGV and other AFV. At its June 2013 meeting, the National Association of State Utility Consumer Advocates passed resolution 2013-4, "Urging Public Utility Commissions To Protect Against Retail Ratepayer Subsidization Of Regulated Natural Gas Utility Participation In The Non-Regulated Natural Gas Vehicle Refueling Market."[8]

[8] See Resolution 2013 -4 under the "Gas" heading at: http://www.nasuca.org/archive/res/index.resoltuions.php

The bottom line is that public utilities are not good tax collectors to pay for non-utility measures or programs that deviate from basic utility service. Keeping "clean" utility rates is good for utility customers and promotes good public policy

Other Policies are Better Suited to Promote Enhanced use of AFV

Utility Regulators should focus on appropriate policies that mitigate or remove barriers to the development of AFV. Keeping natural gas costs low and utility provision of NGV service at full cost of service provides the supporting infrastructure to allow a more robust market to develop. Proactive measures should also be put in place regarding EV infrastructure and rates to ensure that the EV system and demand can develop without impediments. In this way, the Commission's focus is appropriately limited to infrastructure rather than choosing winners and losers as the AFV market develops and expands.

While the Commission's appropriate role may be limited, policymakers have other options better suited to promote the enhanced use of AFV. More appropriate funding sources for the development of AFV infrastructure including the following:

- Gasoline tax: Experts in Utah have begun to advocate for an increase in Utah's gasoline tax. The promotion of AFV could be included in the uses for such a tax.
- Miles-driven tax: The Office has observed experts in transportation policy discuss the idea of a miles-driven tax. While such a tax clearly has collection challenges, it does better represent cost causation.
- Vehicle registration fee: Such a fee could be a sliding scale based on the emission category of the vehicle being registered, with higher polluting vehicles paying a higher annual fee. Such a fee would also better represent cost causation.
- General fund: To the extent that policymakers view air quality as providing general public benefit, the general fund may be the best source to support clean air objectives. Such funding provides a transparent accounting to the general public of expenditures of this nature.

- Public budgets: In many cases the payback period for investments is less than two years[9]. Such a good return on investment does not require additional subsidy.

Including the promotion and funding of AFV within a larger package of transportation policy would likely be a more successful mechanism of advancing AFV as the concepts are related. Tying AFV to utility rates is not as good of a fit. Further, as AFV become a robust market with multiple participants, these private entities are much better suited to promote and sell new products to customers.

Other Policies May Be Better suited to Improve Air Quality

Although the Office conducted research in preparation for filing these comments, our expertise is primarily related to utility rates and services not air quality. However, our preliminary research raises concerns that not only are utility rates poorly suited for funding air quality solutions, the proposed solution of "enhanced use of alternative fuel vehicles" may not be among the most cost effective solution to addressing Utah's air quality issues. For example, as reported in a recent presentation to the Air Quality Board, recent research indicates that the air quality impact from wood-burning stoves is greater than previously reported.[10] The Office is hopeful that entities with more expertise on air quality issues will provide specific data related to the proposed policy to enhance the use of AFV.

Another example from agencies with expertise on air quality issues is a recent letter from the National Association of Clean Air Agencies (NACAA)[11] supporting the proposed EPA Tier 3 Vehicle Emission and Fuel standards (Tier 3)[12]. In this letter the association indicates: "We [NACAA] are so supportive [of proposed Tier 3 standards] because we know of no other strategy that can achieve such substantial, immediate and cost-effective reductions in air pollution as Tier 3."[13]

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[9] According to statements made in the legislative committee meeting addressing S.B. 275.
[10] See http://www.airquality.utah.gov/Air-QualityBoard/Packets/2013/June/ITEM_Xb_KKelly_Presentation.pdf
[11] For more information about the association see www.4cleanair.org.
[12] The complete letter can be found at: http://www.4cleanair.org/Documents/NACAA-Tier_3_Comments_to_EPA-06%2028.pdf
[13] See page 1 of NACAA letter.

The Office asserts that the policy concern about air quality can be approached with the same methodology as policy issues on which we do have expertise. Our observations have been that the directives from SB275 have resulted in quite a bit of misunderstanding and confusion regarding the problems being addressed, as well as the purposes for and access to authorized funding mechanisms. The Office offers the following recommendations on a methodology to determine the best strategies for mitigating Utah's air quality problems.

- First, identify the specific problem to solve and what constitutes a successful outcome.
- Second, identify the most cost effective methods of solving the problem. Determine the primary contributors to poor air quality and the costs of the various methods to mitigate the sources of poor air quality. What solutions have the biggest impact and the lowest costs?
- Third, be transparent about funding and methods to measure success. The Office agrees that many Utah residents are willing to pay a certain amount extra to clean up the air. However, the Office asserts that Utahns do not like having even a small annual amount hidden in their utility bills to go toward purposes that aren't well defined and for which progress isn't reported.

To the extent utility rates are considered, utility ratemaking principles should be maintained

The Office has presented compelling arguments demonstrating that using public utility rates to subsidize AFV development would be contrary to the public interest. However, to the extent that such subsidies are mandated, the ratepayer protections provided by standard utility ratemaking principles should be maintained. Two key ratemaking principles include the cost effectiveness standard for what is included in rates and the cost causation principle for allocating the costs included in rates.

Regulators typically review all new utility investment in the context of cost effectiveness. Before new costs are allowed in rates, the utility is required to demonstrate that it selected the least cost (considering risk) option for meeting the demand. If utility rates are used to subsidize AFV development in the interest of improving Utah's air quality, it would be appropriate for regulators to

at least ensure that the ratepayer money is going toward the most cost effective solution of improving air quality.

The evidence suggests that promoting the use of AFV is not the most cost effective method to improve Utah's air quality. First, the National Association of Clean Air Agencies has clearly indicated that the proposed EPA Tier 3 standards would be the most cost effective option for improving air quality. Second, the Office is concerned that AFV have not been evaluated in the context of other air quality improvement options. For example, what are the relative costs and benefits of promoting AFV compared to improving point source polluters or making changes to wood burning stoves? As indicated above, a recent presentation to the Air Quality Board referenced a joint study involving researchers from the University of Utah, the EPA, and the Utah DEQ in which the findings indicate that the air quality impact of wood burning stoves has been underestimated. In the summary presentation, the researchers indicated that the impact of one wood burning stove is equal to that of driving between 525 and 1150 miles.

Air quality is an issue on which some would suggest that we employ an "all of the above" strategy. The idea being that no single measure can "solve" the problem, thus every possible improvement idea should be pursued in the hope that the sum of all the measures will result in meaningful improvements. The Office certainly understands this approach from other contexts. However, the Office asserts that a certain minimum level of cost effectiveness must be met and potential harmful consequences addressed before the measure is pursued. As the Office has demonstrated in these comments, using public utility rates does not meet this minimum test.

No matter how cost effective any measure to improve air quality may be, using utility rates to fund such solutions do not meet the test of cost causation. For example, using natural gas rates to subsidize the development of AFV would mean that a residential customer pays in proportion to their heating bill, not in proportion to their contribution to pollution. This results in potentially significant mismatches between those who contribute to the problem and those who pay for a potential solution. A residence that heats with a wood burning stove, which is somewhere between

60,000 and over 100,000 times[14] more polluting that a natural-gas fired furnace, would contribute nothing if the solution is tied to natural gas bills. In contrast, a residence that must keep its home a little warmer due to having elderly or ill family members home during the day would pay disproportionately much more, despite the fact that the members of this residence may drive very little or not at all.

Once significant subsidies are included in rates, the impacts have a tendency to multiply. Each subset of customers will likely seek their own benefits. For example, it is unlikely that Questar's rural customers will be supportive of increases in their heating bills to clean up the air quality on the Wasatch Front. This could serve as an argument for subsidizing the expansion of natural gas into rural areas. Consequently, the low rates currently enjoyed by Utahns will begin to disappear.

Conclusions and recommendations

In conclusion, the Office offers the following responses to the questions asked by the legislature:

(a) What role should gas corporations play in the enhancement and expansion of the infrastructure and maintenance and other facilities for alternative fuel vehicles?

Gas corporations should fulfill their duty as a public utility and construct necessary pipelines, distribution facilities and other infrastructure to meet any increases in demand for natural gas. To the extent gas corporations provide NGV fueling stations, they should be required to set rates at full cost of service to prevent any barriers to entry to other market participants.

(b) What potential funding options are available to pay for the enhancement and expansion of infrastructure and facilities for alternative fuel vehicles?

Potential funding mechanisms include:

[14] The result depends on which measurement and what specific type of stove. See page 17 of presentation.

- Sliding scale vehicle registration fees that recognize differing vehicle emissions level and charge higher polluting vehicles higher fees;
- Funding through standard transportation funding mechanisms such as the gasoline tax or a miles-traveled tax; and
- Funding through general funds to maintain transparency and recognize the public benefits of improved air quality.

For the reasons described herein, public utility rates should not be seen as an appropriate funding mechanism due to the unintended consequences on economic development and low and fixed-income families as well as the harmful impacts on the development of the overall AFV markets.

(c) What role can or should the local government play, including any local government entity established for the purpose of facilitating conversion to alternative fuel vehicles and of promoting the enhancement and expansion of the infrastructure and facilities for those vehicles?

The Office proposes that some of the principles used in utility ratemaking could have practical application in this setting and offers the following comments. In utility regulation, one principle is to ensure that infrastructure is not duplicated by multiple providers. Local governments and the specific type of entity referenced could serve the important role of facilitating coordination and joint venture such that facilities are not duplicated and are fully utilized. Another principle core to utility regulation is to have regulation substitute for markets in circumstances where a natural monopoly exists or in which markets are not effective. The Office recommends that local governments and entities step in to fill the role of development and infrastructure expansions in circumstances such as these. However, the Office further recommends that government should not direct outcomes or choose winners and losers in circumstances where markets can develop to meet customer demands.

(d) What are the most effective ways to overcome any obstacles to converting to alternative fuel vehicles and to enhancing and expanding the infrastructure and facilities for alternative fuel vehicles?

Utility regulation has a limited role in overcoming obstacles to converting to alternative fuel vehicles. The first and most important action that should be taken is to ensure that utility provision of NGV service is not subsidized by utility rates. This removes the primary impediment of expanding the market to include multiple suppliers. Only through a market will the use of NGV increase substantially.

The other effective way to overcome obstacles is to seek funding sources that are transparent, consistent with the principles of cost causation and tie coherently to other transportation and/or air quality initiatives.

In addition, the Office offers the following recommendations to the Commission:

- Maintain cost of service regulation for the provision of natural gas. The combination of proximity to resources, good utility management and good utility regulation has resulted in low natural gas rates that have benefited Utah customers. Continuation of this paradigm will provide the framework for AFV that use natural gas as an input.
- Establish and maintain cost of service rates for utility provision of NGV service. After twenty years of a subsidized rate, the NGV market is now well enough established to remove the subsidy. Even without a subsidy, fueling with CNG is extraordinarily cost competitive compared to gasoline. Once the subsidy is removed, other CNG providers will be able to come into the Utah market. The best way to advance NGV at this point in its development is to facilitate a robust market.
- Establish a proper framework for the development of EV, in preparation for potential increased demand and development in that market. Many utilities and other stakeholders have suggested that time of day rates are an essential component to implement EV. The Office asserts that the Commission should not pre-judge that issue. Rather, a regulatory proceeding to evaluate what parameters are necessary should be conducted before any findings are made.

Finally, the Office offers the following general recommendations and comments to policymakers when considering AFV and related issues:

- Allow public utilities to focus on the provision of utility services. Require utility regulators to oversee the establishment of parameters that prevent obstacles to the advancement of AFV without including rate subsidization for such purposes.
- Collect the best quality of data possible, from the true experts in the field, and pursue the most cost effective solutions to our air quality challenges. Conducting this investigation in the context of utility regulation may not provide the most ideal and comprehensive view of the potential issues and solutions.
- Natural gas has many benefits and has served Utah well. It can help reduce the dependence on foreign oil, provides some local economic benefits, and has a cleaner emissions profile than some of the other fuel choices. However, natural gas is not a panacea to all of our air quality and energy concerns.