BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Investigation Required by S.B. 275, Energy Amendments, Addressing Cleaner Air through the Enhanced use of Alternative Fuel Vehicles	**DOCKET NO. 13-057-02** **Reply Comments of the Southwest Energy Efficiency Project and Utah Clean Energy**

INTRODUCTION

The comments in this docket have addressed a wide range of issues. Our initial comments and these reply comments are intended to provide the Commission with sufficient information to inform their recommendations regarding appropriate policy options for removing barriers to the development of alternative fuel vehicle infrastructure in Utah, specifically electric vehicle infrastructure. As highlighted in the Initial Comments from the Utah Office of Consumer Services, the U.S. Department of Energy Alternative Fuels Data Center includes electricityas an alternative fuel.[1]

Given the air quality benefit associated with electric vehicles (EV) documented in our initial comments, SWEEP and UCE recommend that the Commission include policy mechanisms designed to facilitate electric vehicle infrastructure in its report to the legislature on "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.[2]"

[1]U.S. Department of Energy Alternative Fuels Data Center, see: http://www.afdc.energy.gov/fuels/electricity.html
[2]S.B. 275 Substitute Energy Amendments, Enrolled Copy, lines 79-81, available at: http://le.utah.gov/~2013/bills/sbillenr/SB0275.htm

COMMENTS

As commenters in this docket have noted, incentives are sometimes necessary to build the infrastructure necessary to allow entrepreneurship, markets, and competition to flourish. Investments in EV infrastructure will allow Utah to achieve the air quality benefits associated with the enhanced use of electric vehicles.

EVs are not only a promising solution to help address Utah's air quality problems, but are also a viable and convenient way to meet the daily transportation needs of many Utahns. Research on driving behavior and patterns shows that electric vehicles are able to meet the vast majority of people's daily driving needs. Analysis of the latest data available from the National Household Travel Survey conducted by the US Department of Transportation shows that the average distance that a car is driven in a day is 36.5 miles in urban areas and 48.6 miles in rural areas, both easily within the range of battery electric vehicles such as the Nissan Leaf. Even without charging during the day, an electric vehicle with a 100 mile range would be able to satisfy 93% of all daily travel. Electric vehicles are even better suited to regular trips such as commuting, which on average are only 13.6 miles, with 95% of commuters traveling less than 40 miles to get to work.[3]

While EVs are a small part of the vehicle fleet today, there is significant potential for them to play a much larger role in coming years, particularly if there is strong policy support at the state level. In response to parties' comments, and to provide greater detail on recommendations in our initial comments, we provide additional information below.

[3]Solar Journey USA (2013). available at http://www.solarjourneyusa.com/HowFarWeDrive_v1.3.pdf

1. RESPONSE TO COMMENTS ABOUT THE FEDERAL TIER III EMISSIONS STANDARDS

As noted in comments by the Office of Consumer Services, the National Association of Clean Air Agencies has stated that adoption of Tier III standards will have "substantial, immediate and cost effective reductions in air pollution."[4]The EPA's proposed Tier III standards, if implemented, will reduce the sulfur content of gasoline and reduce tailpipe emissions from gasoline fueled vehicles which would help to reduce emissions and improve urban air quality in the Wasatch Front.

Provided that tailpipe emissions are reduced via the Tier III standards, in 2020,battery electric vehicles will nevertheless offer emission advantages for criteria pollutants such as VOCs, SO2 and CO.[5] And over the longer term, electric vehicles, when powered by renewable electricity sources, provide the opportunity to completely eliminate vehicle related emissions and will be one of the few ways to achieve emission reductions beyond the Tier III standards once they are in effect. In addition, Tier III standards will be phased in between 2017 and 2025 so they will take a number of years to improve air quality. Because of their availability in the market today, electric vehicles offer the opportunity to realize immediate air quality improvements from new vehicles along the Wasatch Front.

Finally, there are also potential federal regulations that will lead to additional reductions in emissions from electric vehicles. Power plants today are subject to regulations which are helping electricity generation become cleaner, such as regional haze rules, and will soon be subject to additional rules, including the mercury and air toxics standards and water regulations.In addition, the EPA has been directed to pursue new rulemakings on power plant greenhouse gas emissions for both new and existing power plants. Just as the Tier III standards

[4]See Initial Comments of the Office of Consumer Services, page 7.
[5]See Initial Comments of SWEEP and UCE, page 12.

will, if adopted, lead to reductions in emissions from gasoline vehicles, power plant standards will lead to further reductions in emissions from electric vehicles.

2. EXPANDED INFORMATION AND SAMPLE LANGUAGE FOR PROPOSALS OUTLINED IN INITIAL COMMENTS

We would like to provide additional details on how other states have addressed a number of the policy options that we proposed in our initial comments.

A. State Tax Credit for the Purchase or Lease of Alternative Fuel Vehicles

As noted in our initial comments, the additional incremental cost of an electric vehicle is a significant barrier to greater adoption of EVs. To help overcome this, we recommended that the state income tax credit be modified to bring parity between electric vehicles and natural gas vehicles in order to reflect the public policy of improving air quality. Below is an example of such a policy.

Colorado: Colorado House Bill 11-1331 was adopted in 2011 (and amended in 2013 as HB 13-1247) and provides a tax credit of up to $6,000 for the purchase of alternative fuel vehicles, including original equipment manufacturer and conversions of electric and compressed natural gas vehicles.[6]Importantly this policy makes either the buyer *or thelessee* of an alternative fuel vehicle eligible to receive the state tax credit. This is important since many alternative fuel vehicles are leased.

B. Allowing the Resale of Electricity for Electric Vehicle Charging

[6]Colorado House Bill 13-1247 (2013), available at http://www.leg.state.co.us/clics/clics2013a/csl.nsf/fsbillcont2/c64eaf0a2c033f4987257afe0063369a?OpenDocument&Click=87257A0F006EC84C.8975551e51fa01d087256dd30080e1d5/$Body/0.3116.

To improve the convenience of driving EVs, it is important for EV owners to be able to charge their vehicles away from home. Currently, Utah statute prohibits entities from selling electricity for vehicle charging without being regulated as a public utility. Below is the legislative language used by three states that have enabled the re-sale of electricity for charging electric vehicles.

Virginia: "Excludes any person who is not a public service corporation and who provides electric vehicle charging service at retail from the meaning of the terms "public utility," "public service corporation," or "public service company." The ownership or operation of a facility at which electric vehicle charging service is sold, and the selling of electric vehicle charging service from that facility, does not render the person a public utility, public service corporation, or public service company solely because of that sale, ownership, or operation. The provision of electric vehicle charging service by a person who is not a public utility shall not constitute the retail sale of electricity if the electricity furnished in connection with the provision of electric vehicle charging service is used solely for transportation purposes… Providing electric vehicle charging service is declared to be a permitted electric utility activity of a certificated electric utility. The Commission is barred from setting the rates, charges, and fees for the provision of retail electric vehicle charging service provided by non-utilities."[7]

Washington State: "The Utilities and Transportation Commission (UTC) may not regulate the rates, services, facilities, and practices of any entity that offers battery charging facilities to the public for hire if that entity: (1) is not otherwise subject to the UTC's jurisdiction as an electrical company; or (2) is otherwise subject to the UTC's

[7]Virginia House Bill No. 2105 (2011). The full bill is available at: http://leg1.state.va.us/cgi-bin/legp504.exe?111+ful+HB2105+pdf

jurisdiction as an electrical company, but its battery charging facilities are not subsidized by any regulated service. An electrical company may offer battery charging facilities as a regulated service, if the UTC approves."[8]

Colorado: "Persons generating electricity for the use in alternative fuel vehicle charging or fueling facilities as authorized by subsection (4) of this section, persons reselling electricity supplies by a public utility, or persons reselling compressed or liquefied natural gas, liquefied petroleum gas, or any component parts of by-products to governmental entities or to the public for use as fuel in alternative fuel vehicles or buying electricity stored in such vehicles for resale are not subject to regulation as a public utility. Electric and natural gas public utilities may provide the services described in this subsection (2) as unregulated services, and these unregulated services may not be subsidized by the regulated services of the electric or natural gas public utility."[9]

C. <u>Create a time of day EV electricity rate tariff that will incentivize off-peak charging.</u>

Below are examples of tariffs offered by Georgia Power and two major Southwestern utilities specifically for electric vehicle owners. We are not recommending any specific tariff but would welcome a regulatory proceeding to establish an appropriate EV tariff.[10]

Georgia Power offers a tariff for electric vehicle owners, which provides discounted rates for charging during off-peak hours. A super off-peak rate is offered

[8]Washington Substitute House Bill 1571 (2011). The full bill is available from:http://apps.leg.wa.gov/documents/billdocs/2011-12/Pdf/Bills/House%20Passed%20Legislature/1571-S.PL.pdf
[9]Colorado House Bill 12-1258. (2012). The full bill is available from: http://www.leg.state.co.us/clics/clics2012a/csl.nsf/fsbillcont2/7fa839d4409ff8a98725798800778f81?OpenDocument&Click=872578C7006E04BB.8975551e51fa01d087256dd30080e1d5/$Body/0.3116
[10]See Initial Comments of the Utah Office of Consumer Services, page 12

between 11 pm and 7 am which charges $0.013 per kWh, significantly lower than the on-peak rate of $0.203 per kWh.[11]

Arizona Public Service, the state's largest utility, has regular residential rates that are tiered based on electricity consumption. However, it offers Time of Use rates that are not tiered and also currently is offering an experimental time of use tariff for electric vehicle owners that is not tiered.[12]

NV Energy offers a special electric vehicle time of use rate. It allows customers to pay a discounted rate if they charge the vehicle during the utility's off-peak hours between 10 p.m. and 6 a.m. Over a 12 month period, the Time of Use rate is not expected to cost more than the flat rate – if so, NV Energy will credit the difference back to the customer and give the customer the option to move back to the flat rate.[13]

D. <u>Adopt EV-ready requirements in building codes, requiring that new garages and parking lots have conduit available for EV charging stations.</u>

This sample code is provided as an example of the appropriate language for developing an Electric Vehicle Supply Equipment requirement in a building code.

Sample Building Code (Los Angeles)

Residential
1. For one- or two- family dwellings and townhouses, provide a minimum of:
   a. One 208/240 V 40 amp, grounded AC outlet, for each dwelling unit; or
   b. Panel capacity and conduit for the future installation of a 208/240 V 40 amp, grounded AC outlet, for each dwelling unit.

The electrical outlet or conduit termination shall be located adjacent to the parking area.
2. For other residential occupancies where there is a common parking area, provide one of the following:

[11]Information on Georgia Power's Plug-in Electric Vehicle tariff can be found at http://www.georgiapower.com/pricing/residential/plugin-vehicles.cshtml
[12]Arizona Public Service's regular residential, time of use and experimental electric vehicles tariffs are available at: http://www.aps.com/en/ourcompany/ratesregulationsresources/serviceplaninformation/Pages/residential-sheets.aspx
[13]Nevada Energy's EV tariff can be viewed at https://www.nvenergy.com/home/saveenergy/electricVehicle.cfm

a. A minimum number of 208/240 V 40 amp, grounded AC outlets equal to 5 percent of the total number of parking spaces. The outlets shall be located within the parking area; or
b. Panel capacity and conduit for future installation of electrical outlets. The panel capacity and conduit size shall be designed to accommodate the future installation, and allow the simultaneous charging, of a minimum number of 208/240 V 40 amp, grounded AC outlets, that is equal to 5 percent of the total number of parking spaces. The conduit shall terminate within the parking area; or
c. Additional service capacity, space for future meters, and conduit for future installation of electrical outlets. The service capacity and conduit size shall be designed to accommodate the future installation, and allow the simultaneous charging, of a minimum number of 208/240 V 40 amp, grounded AC outlets, that is equal to 5 percent of the total number of parking spaces. The conduit shall terminate within the parking area.

When the application of the 5 percent results in a fractional space, round up to the next whole number.
Non-Residential
Provide a minimum number of 208/240 V 40 amp, grounded AC outlet(s), that is equal to 5 percent of the total number of parking spaces, rounded up to the next whole number. The outlet(s) shall be located in the parking area.[14]

E. <u>Support adoption of EVs in government fleets when EVs are appropriate to the fleets' needs and cost-effective compared to a gasoline vehicle.</u>

Approximately 30 states have some statute that requires or encourages a certain percentage of new state (and sometimes other government) fleet vehicles to be either high efficiency or alternative fuel vehicles. Below are examples of fleet policies from several states taken from the Department of Energy's Alternative Fuels Data Center.

South Carolina: "State agencies purchasing motor vehicles must give preference to hybrid, plug-in hybrid electric, biodiesel, hydrogen, fuel cell, or flexible fuel vehicles when the performance, quality, and anticipated lifecycle costs are comparable to other available motor vehicles."[15]

[14]City of Los Angeles (2012). Sections 99.04.106.6 and 99.05.106.5.3.1Available at http://ladbs.org/LADBSWeb/LADBS_Forms/PlanCheck/2011LAAmendmentforGreenBuildingCode.pdf
[15]Policy available at: http://www.afdc.energy.gov/laws/law/SC/6458

New York: "All new light-duty vehicles that state agencies and other affected entities procure must be AFVs, with the exception of designated specialty, police, or emergency vehicles. Hybrid electric vehicles qualify under these requirements."[16]

Texas: "State agency fleets with more than 15 vehicles, excluding emergency and law enforcement vehicles, may not purchase or lease a motor vehicle unless the vehicle uses compressed or liquefied natural gas, propane, ethanol or fuel blends of at least 85% ethanol (E85), methanol or fuel blends of at least 85% methanol (M85), biodiesel or fuel blends of at least 20% biodiesel (B20), or electricity (including plug-in hybrid electric vehicles)."[17]

Colorado: "The Colorado Department of Personnel and Administration (DPA) must purchase motor vehicles that operate on compressed natural gas (CNG), plug-in hybrid electric vehicles, or vehicles that operate on other alternative fuels, subject to the availability of vehicles and adequate fueling infrastructure and assuming the incremental base or life cycle cost of the vehicle is not more than 10% over the cost of a comparable dedicated conventional vehicle. DPA may adopt a policy to allow some vehicles to be exempt from this requirement."[18]

SWEEP and UCE appreciate the opportunity to submit these comments. If the Commission has questions about the analysis or policy recommendations described herein, please contact the following individuals for additional information or resources:

[16]Policy available at: http://www.afdc.energy.gov/laws/law/NY/5328
[17]Policy available at: http://www.afdc.energy.gov/laws/law/TX/6585
[18] Policy available at: http://www.afdc.energy.gov/laws/law/CO/5619

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