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STATE CORPORATION COMMISSION
Division of Information Resources

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2020 JUN 24 A 8: 17

June 24, 2020

MEMORANDUM

TO: Document Control Center
Clerk's Office

FROM: Ken Schrad

RE: PUR-2020-00051

I have attached comments dated June 23, 2020 signed Carl W. "Bill" Eger III, energy manager in the Office of Energy Management of the City of Alexandria, Virginia. The document was emailed to my attention shortly after midnight on Wednesday, June 24. The document contains formatting that could not be accommodated using the text box feature for submitting comments in cases that is available on the SCC website.

I ask that you pass this correspondence to the case file referenced below.

PUR-2020-00051

Ex Parte: Electrification of Motor Vehicles

Attachment –

- **Comments from the City of Alexandria, Office of Energy Management**

June 23, 2020

State Corporation Commission
c/o Document Control Center
P.O. Box 2118
Richmond, Virginia 23218-2118

Subject: City of Alexandria Office of Energy Management Comments regarding PUR-2020-00051 – *Ex Parte. Electrification of Motor Vehicles*

The City of Alexandria Office of Energy Management hereby submits comments regarding the State Corporation Commission ("SCC") case PUR-2019-00051 *Ex Parte. Electrification of Motor Vehicles*. We appreciate the SCC's attention to the very important issue of transportation electrification. The comments herein reflect the City of Alexandria interests to accelerate the transition to electric vehicles in the Alexandria community and in the Commonwealth of Virginia as a whole.

Background

The City of Alexandria's interest in the electrification of motor vehicles and transportation derives from its commitment to reduce city-wide greenhouse gas emissions by one-half by 2030, with a further goal of reducing city-wide greenhouse gas emissions by 80-100 percent by 2050 as clearly stated in City's Environmental Action Plan 2040 (EAP2040) passed by City Council on July 9, 2019.[1] This commitment is further emphasized by the Alexandria City Council's passage of a resolution declaring a climate emergency stating that in order to support the stabilization of a 1.5 C (2.4 F) global temperature according to scientific consensus described in the United Nation's Intergovernmental Panel on Climate Change's special report on Global Warming of 1.5 C, a material reduction of greenhouse gas emissions of roughly 4-5% each year is necessary to avoid profound and disastrous impacts on global climate, ecosystems, and human societies.[2]

[1] City of Alexandria Environmental Action Plan 2040, https://www.alexandriava.gov/eco-city
[2] Alexandria City Council Declares Climate Emergency, https://www.alexandriava.gov/news_display.aspx?id=111923

In Alexandria, transportation and mobile sources account for approximately 36% of greenhouse gas emissions.[3] As such, the City's Environmental Action Plan 2040 (EAP2040) includes several actions reflecting its commitment to the electrification of motor vehicles. These actions include:

- By FY2020, develop a strategy for community electric vehicle charging infrastructure.
- By FY2021, initiate electric passenger vehicle pilot programs for DASH, Alexandria City Public Schools, and the City vehicle fleet to evaluate costs, benefits, technical feasibility, and implementation opportunities to transition City fleet vehicles to electric vehicle technology, and install vehicle charging infrastructure at City facilities.
- By FY2024, implement electrification of, at minimum, 25 percent of applicable nonelectric passenger City fleet vehicles consistent with Fleet Replacement Plan criteria and scheduled replacement.
- By FY2028, implement electrification of, at minimum, 10 percent of DASH, rapid transit routes, and King Street Trolley buses. Provide necessary electric vehicle charging infrastructure at City facility locations.
- By FY2029, implement and support the implementation of a publicly-accessible electric vehicle charging infrastructure that is supported by renewable energy supply.
- By FY2040, implement electrification of all non-electric City vehicle fleets and include ACPS, DASH, rapid transit routes, heavy-duty equipment and vehicles. Provide necessary electric vehicle charging infrastructure at City facility locations. Hybrids will be used as an interim until electric vehicles can be substantially implemented.

Electric vehicles and electric vehicle charging infrastructure – including expanding electric vehicles in the City's vehicle fleet, electrification of the City of Alexandria's DASH bus fleet, and the development of strategy for community electric vehicle charging infrastructure – form an important part of the City's overall effort to reducing greenhouse gas emissions when combined with overall transition of electricity generation from renewable energy sources such as electricity generation from wind and solar photovoltaic sources.

Following the SCC's request for comments in this case, the City of Alexandria's Office of Energy Management responds where it is in the best position to answer with regards the City of Alexandria's interests in the electrification of motor vehicles.

Existing Development and Projected Growth

How many electric vehicles are currently deployed in Virginia and what is the expected growth over the next five, ten and twenty years?

Preliminary analysis suggests there are approximately 550 registered electric vehicles in the city of Alexandria with model years dating back to the mid-2000's. In 2019, about 6% of new vehicles registrations in the city of Alexandria were for electric vehicles,

[3] City of Alexandria, Virginia; Community-wide Greenhouse Gas Inventory Summary Factsheet https://www.alexandriava.gov/uploadedFiles/tes/eco-city/Alexandria%20GHG%20Factsheet_Apr2018%20-%20FINAL.pdf

including battery electric and plug-in hybrid electric. To meet the City's aggressive climate action and greenhouse gas emission reduction goals, in 2030 approximately 35 – 45% of new vehicles registrations will need to be for electric vehicles. In 2040, in twenty years, this need increases to approximately 90% of new vehicle registrations. Finally, in 2050, the City ambitions that nearly 100% of new vehicle registrations in 2050 will need to be for electric vehicles.[4]

What is the current level of public charging infrastructure in Virginia and how is that expected to grow?

According to the United States Department of Energy's Alternative Fuel Data Center (AFDC), there are approximately 23 publicly-accessible Level 2 and DC Fast Charging stations – representing 54 accessible plugs – in the city of Alexandria.

The City is currently facilitating the development of it's first Electric Vehicle Charging Infrastructure Readiness Strategy; a roadmap to anticipate the electric vehicle charging infrastructure needs of City residents, workforce members, and visitors as more electric vehicles become more mainstream.[5] This Electric Vehicle Charging Infrastructure Readiness Strategy project includes:

- Evaluating projections for future electric vehicle charging infrastructure needs;
- Recommending locations for publicly-accessible charging infrastructure with integration into a broader regional electric vehicle charging infrastructure network;
- Recommending charging infrastructure options, including hardware, business ownership, and operation models, interoperability, and operations and maintenance solutions;
- Reviewing the City's zoning, codes, permitting, and inspection codes and development processes and requirements to recommend updated, or new, language to promote and anticipate electric vehicle charging needs; and
- Recommending policies, approaches, and synergies for locating electric vehicle charging infrastructure at businesses, multi-unit dwellings, single-family homes, right-of-way, and other locations.

While the City of Alexandria is unable to provide precise growth projections or locations of it's need for publicly-accessible charging at this time, the City is positioned to work with the SCC, utility companies, and interested stakeholders to provide this information upon it's availability.

Of particular note, the SCC should take into consideration the growth in need for charging infrastructure opportunities where there may not be easy access for those who have an electric vehicle. Such locations where lack of easy access to charging infrastructure may be includes: multi-unit dwellings such as apartments, condominiums, or residences or dwellings without garages, driveways, or similar personal parking locations. Additionally, the SCC may look to opportunities for publicly-accessible electric vehicle charging infrastructure that supports single-occupancy vehicles

[4] City of Alexandria Electric Vehicle Charging Infrastructure Readiness Strategy DRAFT, unpublished

[5] City of Alexandria, Electric Vehicle Charging Infrastructure Readiness Strategy, https://www.alexandriava.gov/tes/eco-city/info/default.aspx?id=109894

transportation alternatives, including transition of taxi services to electric vehicles, transportation network companies, and in areas where there is new land and economic development growth

Rate Design

Whether and how rate designs should be structured to incentivize the use of electric vehicles?

At this time, the City of Alexandria takes no positions on any specific rate design considerations to incentivize the use of electric vehicles. However, support for rate structures – such as time-of-use rates – that provides incentive for owners of electric vehicles to charge at times that are beneficial for their own cost management and savings, while also providing benefits to electrical grid operations. should be taken into consideration and offered by electric utility companies in Virginia. Moreover, where rates design can support matching electric use with the generation of electricity from renewable energy sources such as wind or solar photovoltaic generation – thus supporting the mitigation of greenhouse gas emissions from the use of transportation – should also be of high priority consideration.

The City of Alexandria – and it's sister organization. the Alexandria City Public Schools (ACPS) – ambition transition of their respective public transit bus (DASH) and school bus fleets to zero-emission battery-electric busses over the next 20-30 year. Rate designs that support cost-effective operation of these electric vehicles may not be immediately in the purview of the SCC, but where similar electric transportation platforms may exist – such as heavy trucking or equipment – there may be utility in coordinating rate design that incentivize and support demand management, beneficial grid services, and storage opportunities.

What utility-sponsored programs (such as peak shaving programs) could be implemented to permit a utility to reliably call on electric vehicles to provide power to the grid?

As previously indicated, the City of Alexandria – and it's sister organization. the Alexandria City Public Schools (ACPS) – are currently planning the transition of their respective bus fleets to zero-emission battery-electric busses over the next 20-30 year time horizon. The City sees these battery-electric busses as valuable resources for grid management, including serving as a peak-shaving resource, when busses are in connection with the electricity grid for charging or during dormant periods. Where such battery-electric busses could be called upon as a peak-shaving resource to provide power to the grid when not directly in use for their intended purpose – public or school transit – and could be appropriately compensated for the value to the grid's management – either for distribution-level needs or wholesale market needs through the PJM electricity market structures – there is a natural alignment for such utility programs. The City of Alexandria see benefits in the development of such utility-sponsored program and rate designs that support such alignment.

Public Charging Stations

<u>What is the proper role, if any, of utility investment in the deployment of public charging stations?</u>

> The City of Alexandria takes no specific position on the role of utility investment in the deployment of public charging stations. However, the City does see opportunity for the electric utilities to support publicly-accessible charging opportunities where there are synergies with other utility investments such as electric distribution poles or streetlighting assets – which are often in public right-of-way – which may offer cost and accessibility benefits to those members of the public needing public charging access.

The City of Alexandria Office of Energy Management appreciates the opportunity to submit these comments reflecting the City of Alexandria's interests in the electrification of motor vehicles and related matters. We welcome the opportunity to discuss the City of Alexandria's comments in more detail with the SCC if helpful.

Respectfully Submitted,

Carl W "Bill" Eger III
Energy Manager
Office of Energy Management
City of Alexandria, Virginia
bill.eger@alexandriava.gov