



Legislation Details (With Text)

File #:	21-0460	Name:	
Type:	Written Report	Status:	Agenda Ready
File created:	11/16/2020	In control:	City Council Legislative Meeting
On agenda:	1/26/2021	Final action:	
Title:	Receipt and Endorsement of City of Alexandria Alternative Fuel Policy.		
Sponsors:			
Indexes:			
Code sections:			
Attachments:	1. 21-0460_Attachment 1-AltFuelPolicy_DRAFT, 2. 21-0460_Attachment 2 - EPC Letter of Support, 3. 21-0460_Attachment 3-AltFuelPolicy presentation		

Date	Ver.	Action By	Action	Result
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City of Alexandria, Virginia

MEMORANDUM

DATE: JANUARY 20, 2021

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: MARK B. JINKS, CITY MANAGER /s/

DOCKET TITLE:

Receipt and Endorsement of City of Alexandria Alternative Fuel Policy.

ISSUE: How should the City government purchase and manage the City's diverse vehicle fleet in a manner that minimizes greenhouse gas emissions and considers life-cycle economics?

RECOMMENDATION: That City Council receive and endorse the proposed Alternative Fuel Policy (Attachment 1).

BACKGROUND: The City Council-adopted Environmental Action Plan (EAP) 2040 calls for the City to become a national leader in fleet management since City vehicles and equipment account for a significant contribution to the City's overall greenhouse gas emissions. Because these emissions can be reduced (along with vehicle fuel and maintenance costs), through the purchase of alternatively fueled vehicles, the City has developed an Alternative Fuel Policy that proposes to guide the purchase and management of the City's fleet. The City has approximately 770 on-road vehicles (including approximately 650 light vehicles and 120 medium- and heavy-duty vehicles) and 220 attachments, trailers and off-road pieces of equipment.

The proposed policy is consistent with the adopted EAP 2040 and has been reviewed and endorsed by the Environmental Policy Commission (Attachment 2). The policy would help the City meet the following EAP 2040 goals:

- By FY 2024, implement electrification of, at minimum, 25 percent of applicable nonelectric passenger City fleet vehicles consistent with Fleet Replacement Plan criteria and scheduled replacement. (Goal 2.2.5)
- By FY 2040, implement electrification of all City non-electricity energy use (City facilities, operations, and vehicles). (Goal 2.1.6)
- By FY 2040, 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. (Goal 2.2.8)

DISCUSSION: The availability of alternative fuel vehicles that meet the City's operating requirements has expanded substantially in the last few years. Starting in FY 2020 the City Manager had directed that all non-police package sedans purchased be alternative fuel based in some fashion. This has allowed the City to expand its fleet of electric vehicles, add electric/gas hybrids, use state grant funding to purchase six electric DASH buses (and plan for more), purchase hybrid police package vehicles (utilizing energy for regenerative braking), as well as purchase a standard utility truck with an electrically operated bucket.

While the automotive and truck manufacturers have made substantial technological progress in recent years (such as in price, range, fuel efficiency and emissions) more progress remains to be made in particular in regard to light and heavy duty trucks. Some manufacturers are setting aggressive goals in regard to the electrification of their product offerings including light duty trucks. In some instances manufacturers are reducing weight and size of vehicles as a way of reducing fuel consumption (such as for medic units). City staff are watching these trends closely so that when reliability, range and cost are reasonable, the City will be ready to further expand its use of alternative fuel vehicles. It is expected that over the next few years, substantial changes to alternative fuel vehicles will occur in the automotive and small truck fleet, and then as technology improves the City will be able to expand its alternative fuel fleet to include heavier duty vehicles.

DASH and City staff are working closely on a Zero Emissions Bus Implementation effort. The City and DASH have agreed that DASH will gradually increase its purchase of electric buses each year until FY 2026, at which point all buses purchased would be electric.

The Alternative Fuel Fleet Policy intends to guide and accelerate the City toward purchasing the most cost effective, lowest emission, and fuel-efficient vehicles and fuel-using equipment possible, while still meeting operational requirements of the intended use. To accomplish this objective, life cycle cost, fuel type, and fuel efficiency standards and mission/use of the vehicle are to be considered in procurement decisions. The Alternative Fuel Fleet Policy review process also includes "right-sizing" the fleet by reducing vehicle size and eliminating old and underused vehicles and equipment. The Fleet Services Division of the Department of Transportation & Environmental Services now manages the City fleet with governance provided by a multi-agency Fleet Steering Committee, which includes representation from all major users.

The policy recognizes that alternative fuel may not work in all cases and includes an exemption policy in the event there is no model of motorized vehicle or equipment that can comply with the policy and still meet specifications for the vehicle's intended purpose. Among the key strategies/objectives in the policy are recommendations to: optimize fleet size, increase average fuel economy, decrease emissions, reduce vehicle size and best practices to minimize vehicle miles traveled.

The Environmental Policy Commission reviewed this policy at two meetings in Fall 2020 and provided comments which were incorporated into the plan. The EPC final review and endorsement occurred on December 14, 2020.

FISCAL IMPACT: The approved Environmental Action Plan includes a cost estimate of approximately \$150,000 annually to replace conventional passenger vehicles with electric vehicles. That likely understates the actual upfront costs of acquiring Alternative Fuel Vehicles. Electric passenger vehicles currently are generally approximately 15% higher in acquisition cost than purchasing similar vehicles with combustion engines. Fuel savings over time can substantially reduce or eliminate that 15% upfront cost premium. Electric medium and heavy-duty vehicles will likely have a more significant initial cost increase over those with traditional combustion engines. This higher cost is evident in the purchase price of electric buses. There will also be additional costs for charging infrastructure and electric usage. Finally, early analysis points to materially lower maintenance costs for electric vehicles when compared to combustion vehicles.

The plan, as presented, is fiscally unconstrained and can be implemented subject to appropriations. It is expected with climate change and implementation of EAP 2040 remaining a priority of City Council, funding for Alternative Fuel Vehicles in the City budget will remain a priority. The vehicle replacement budget is developed, presented, and approved as part of the annual budget process. Council will have the opportunity to review and approve the budget impact from this policy at that time. Furthermore, implementation reports regarding this policy will be included as well in future annual budget processes.

ATTACHMENTS:

Attachment 1: Alternative Fuel Policy
Attachment 2: Letter of Support from EPC
Attachment 3: Presentation

STAFF:

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