



City of Sunnyvale

Agenda Item

23-0106

Agenda Date: 2/16/2023

2023 COUNCIL STUDY ISSUE

NUMBER

DPW 22-01

TITLE Fleet Planning for Electric Vehicle Transition

BACKGROUND

Lead Department: Department of Public Works
Support Departments: Office of the City Manager
Office of the City Attorney
Environmental Services Department
Community Development Department
Sponsor(s): Sustainability Commission
History: 1 year ago: Deferred by Council
2 years ago: N/A

SCOPE OF THE STUDY

What precipitated this Study?

The Climate Action Playbook (adopted August 2019) includes Strategies 2 and 3 to decarbonize buildings and transportation. A Sustainability Commission-sponsored Study Issue (SI) titled “Reducing the City of Sunnyvale’s Fossil Fuel Infrastructure and Equipment” (DPW 20-01) was intended to encourage the City to review methods to support these strategies and proactively prepare the City’s infrastructure to ensure a transition to decarbonizing the City’s facilities, operations, and vehicles. Staff previously recommended to defer the study based on the current City practice to evaluate each vehicle for suitable electric equivalent and the uncertainty of the electric vehicle (EV) market for many types of vehicles. In response to the staff recommendation regarding DPW 20-01, the Sustainability Commission created this SI to specifically address transportation-related fossil fuel infrastructure in unison with a Fleet Electrification Plan. Identifying ways to implement targets in the Climate Action Playbook Strategy 3, also supports Council Policy 3.7.2 (Reduction of Carbon Dioxide Emissions from City Operations).

What are the key elements of the Study?

The intent of the Study is to ascertain what would be required to reduce the City’s fossil fuel infrastructure while increasing the City’s zero emission vehicles. A Fleet Electrification Plan would be developed with the following Key Elements:

- 1) Total cost of ownership of the City’s three on-site fueling (gas or diesel) stations, including costs of replacement, permitting, inspection, operation, maintenance, and decommissioning.
- 2) Total cost of ownership of gasoline/diesel vehicles compared to electric vehicles (e.g., initial purchase, fueling/charging, maintenance, useful life) for different vehicle types.

- 3) Projections of fleet electrification (%) by year based on predicted EV options and upcoming retirements for each fleet vehicle type.
- 4) Planning (e.g., timeline, budget needs, technical/power requirements, locations, grants) for EV charging to support the growing EV fleet.

Estimated years to complete study: 2 years

FISCAL IMPACT

Cost to Conduct Study

Level of staff effort required (opportunity cost):	Moderate
Funding Required for Non-Budgeted Costs:	\$250,000
Funding Source:	Will seek budget supplement

The cost is for consultant services that are necessary to complete the Study. The consultant team will require different levels of expertise including engineering, environmental, and transportation.

Cost to Implement Study Results

Unknown. The Study would include an assessment of potential costs, including capital and operating, as well as revenue/savings.

EXPECTED CITY COUNCIL, BOARD OR COMMISSION PARTICIPATION

Council-Approved Work Plan: No
Council Study Session: No
Reviewed by Boards/Commissions: Sustainability Commission

STAFF RECOMMENDATION

Defer. This policy issue merits discussion at a future Study Issues Workshop.

Identifying fossil fuel infrastructure and equipment and examining a pathway to electrification is essential for the City to decarbonize its infrastructure over the next 30 years and to achieve the City's Climate Action Playbook targets for Strategy 3.

City staff is already working on electrifying all new, City-owned fleet "pool" cars (i.e., passenger vehicles). Staff is also investigating the feasibility of replacing the existing compressed natural gas garbage trucks with electric trucks as they come up for replacement as part of the new solid waste collection franchise agreement.

The City has immediate plans to begin addressing fossil fuel infrastructure by first addressing its end uses. Pursuant to the Climate Action Playbook Strategy 3, the specific Next Move to address this issue is *Move 3.L: Electrify Municipal Fleet as vehicles are replaced and continue to seek incentives for electric vehicles and charging infrastructure.*

Addressing the end uses through this Move will facilitate eventual phasing out of fossil fuel infrastructure that serves the fleet today. There is uncertainty as to when vehicles that would serve the needs of the fleet will be available, making it very difficult to set forth a clear plan for electrification. For certain vehicle and equipment types, such as police interceptors, backhoes, and fire trucks, alternative all-electric options are not currently available, are available only in pilot stage,

and/or are prohibitively expensive at this time without a clear timeline of how long they will take to get to market. Such vehicles and equipment may still require ongoing support infrastructure, such as underground fuel tanks, and for the foreseeable future will be dependent on fossil fuels.

For these reasons, staff recommends that this Study Issue be deferred to a later date.

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Reviewed by: Teri Silva, Assistant City Manager

Approved by: Kent Steffens, City Manager