



City of Sunnyvale

Agenda Item

21-0040

Agenda Date: 2/25/2021

2021 COUNCIL STUDY ISSUE

NUMBER

DPW 20-01

TITLE Reducing the City of Sunnyvale's Fossil Fuel Infrastructure and Equipment

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. The Sustainability Commission has proposed that the City should 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. Furthermore, identifying ways to implement targets in the Climate Action Playbook Strategies 2 and 3, also supports Council Policy 1.1.9 - Sustainable Development and Green Buildings, as well as 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 and equipment to optimize energy efficiency, electrify buildings and equipment, increase the City fleet with zero-emissions, and decarbonize City buildings.

Key Elements:

- 1) Identify fossil fuel infrastructure within the City that, under normal circumstances would need preventive maintenance, repair or replacement over the next 30 years to 2050 (the span of the Climate Action Playbook targets). This could include, but is not limited to, underground gasoline fuel tanks and associated equipment for supplying gasoline fleet vehicles (e.g., police, fire, general); natural gas vehicle fleet capital equipment; equipment that uses natural gas (such as for heating buildings and water) at City facilities; and natural gas pipelines feeding City facilities.
- 2) Comprehensively evaluate a pathway for electrifying all City-controlled vehicles, including those under contract (such as recycling/garbage).

- 3) For each category of infrastructure, identify the projected amount of money that would be needed to replace existing or anticipated future infrastructure with new non-fossil fuel options through 2050.
- 4) Develop a plan to phase out (or minimize) fossil fuel use in City operations and use associated savings to calculate costs of alternatives and return on investment. Use current funding to replace existing infrastructure with electric or renewable energy infrastructure in alignment with the Climate Action Playbook priorities.

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:	\$500,000
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. 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 buildings, fleet, and other infrastructure over the next 30 years and achieve the City's Climate Action Playbook targets for Strategies 2 and 3.

City staff is already working on electrifying all new (City-owned) buildings and pool cars. 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.

As a part of the City's Climate Action Playbook implementation, the City has immediate plans to begin addressing fossil fuel infrastructure by addressing its end uses, namely use of fossil fuels in buildings and vehicles. Specific next moves that address this are:

- Move 2.D - Electrify municipal buildings upon rebuild or significant remodel, including Civic Center, and
- 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 these moves will facilitate eventual phasing out of fossil fuel infrastructure that serves buildings and the fleet today.

Furthermore, there is a limited or no market for certain types of electric vehicles and equipment, such as police interceptors, backhoes, and fire trucks. All of these may still require ongoing support infrastructure, such as underground fuel tanks, and for the foreseeable future will be dependent on fossil fuel. An evaluation of how all existing buildings can be converted from natural gas to electricity, heavy-duty and public safety vehicles to electric, plus viable options for non-fossil fueled backup generators should wait until technology evolves a bit further. For this reason, staff recommends that this Study Issue be deferred to a later date.

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