



City of Palo Alto

Utilities Advisory Commission Staff Report



(ID # 12064)

Report Type: Informational Report

Meeting Date: 4/7/2021

Summary Title: Foothills Rebuild

Title: Informational Update on the Status and Next Steps for Overhead Line Project (Project EL-21001) for the Palo Alto Foothills Rebuild

From: City Manager

Lead Department: Utilities

Recommendation

This report is provided for the UAC's information and no action is required.

Executive Summary

The purpose of this report is to update the Utilities Advisory Commission on the status of and next steps for our (CPAU) Fire Mitigation project (EL-21001), which will rebuild the approximately eleven (11) miles of overhead line in the Palo Alto Foothills, to minimize wildfire risk. The City of Palo Alto's Utility Department (CPAU) initially solicited bids for a design/build contractor to rebuild, relocate, or replace the overhead lines in the Foothills. However, after reviewing the bids, Staff recommended an alternative solution to design the project in-house and contract as needed for construction. The total cost for this rebuild is estimated to be between \$10 to \$15 million; \$2 million is included in the FY 2021 Electric Capital Budget.

Background

During development of the State of California's Fire-Threat Map, the area of the City of Palo Alto west of Highway 280 was identified as Tier 2, which represents an "Elevated Risk" for the likelihood of wildfires associated with overhead electric utility lines. Then in 2019, a new law¹ mandated that electric publicly owned utilities prepare a wildfire mitigation plan. An independent evaluator reviewed the City's plan and Council received it in January 2020 ([Staff Report No. 10670, January 21, 2020](#)). In addition to more immediate and on-going remediation efforts performed by the City (i.e. vegetation management, inspections, maintenance, etc.), the plan included longer-term strategies of mitigating the risk of wildfires due to overhead electric lines including replacing or reinforcing, as necessary, the approximately 11 miles of 12 kV overhead line and electrical distribution equipment with new overhead or underground facilities along existing or new routes.

¹ [Public Utilities Code 8387](#), modified by SB 901 (2019).

CPAU solicited bids from qualified engineering/construction contractors to design, engineer, and construct the existing city owned overhead electric and fiber optic lines in the Foothills in Palo Alto in a way to minimize the risk of wildfires. Staff reviewed the two proposals received, both of which provided pricing only for reconductoring existing overhead electric facilities, and interviewed both companies, neither of which offered reasonable undergrounding alternatives. Staff's own review identified sections of the line that could be undergrounded, which provides for greater reduction of wildfire risk. Even though undergrounding is more expensive than reconductoring existing overhead lines, staff estimates that by designing the rebuild in-house the total cost could be less than the two proposed bids for 100% reconductoring. Therefore, staff recommended not moving forward with either of the design/build proposals, deciding, instead, to look at alternatives such as in-house design for undergrounding the facilities.

Staff has since launched two pilot projects to explore the undergrounding option. Staff completed the design and used City's contractor to construct one pilot project by the Country Golf Course where an existing 800 ft of overhead electric line was placed underground. This eliminated four (4) poles and the associated overhead wire and hardware that is the main risk to causing wildfires from electrical facilities. The next pilot project is scheduled to start in March on Arastradero Road, which involves undergrounding 2000 ft of electric and fiber line. This will eliminate eight (8) poles and the associated spans of overhead wire. These pilot projects illustrate that undergrounding the electric lines instead of reconductoring them is cost effective, and based on staff's research, underground lines are also generally more effective at reducing fire risk than overhead lines.

Next Steps

Recently, CPAU hired a consultant, ABSG, to conduct a wildfire risk analysis. The consultant will model various scenarios to estimate the potential damage and financial exposure to the City which could result from wildfires caused by the City's electric system. Based on the consultant's findings, Staff will create projects to address the highest risk areas first. Based on the size of the project and the resources available, staff will complete these projects in-house or solicit bids from qualified engineering/construction contractors. There might be areas where it's not feasible to underground and, in those areas, staff will strengthen and reductor the existing electric line. The rebuild is anticipated to be completed over the next five years.

Staff will also prepare an update to the wildfire mitigation plan to submit by July 1, 2021 to the California Wildfire Safety Advisory Board.

Resource Impact

Based on the in-house design of the two pilot projects, Staff estimates the reconductoring or undergrounding cost per mile to be \$1 to \$1.5 million. The total cost to mitigate fire risk for the 11 miles of 12kV overhead electric line with a combination of undergrounding and reconductoring is estimated to be \$10 to \$15 million. There is \$2 million included in the FY 2021 capital budget for EL-21001 and another \$2 million planned for FY 2022.

Stakeholder Engagement

The Wildfire Mitigation Plan was discussed at the September 4, 2019 Utilities Advisory Commission (UAC) [meeting](#), and received by Council in January 2020 ([Staff Report No. 10670, January 21, 2020](#)). As a new Capital Improvement Plan, EL-21001 was reviewed by the Planning and Transportation Commission in June 2020 ([Staff Report No. 11094, June 10, 2020](#)).

Environmental Review

The UAC's review of this update is not a Project requiring California Environmental Quality Act review, as an administrative governmental activity which will not cause a direct or indirect physical change in the environment, under 14 CCR Section 15378(b)(5).