



Agenda Report

July 21, 2025

TO: Honorable Mayor and City Council

FROM: Water and Power Department

SUBJECT: REPORT ON EMERGENCY REPAIR TO GAS TURBINE 3

RECOMMENDATION:

This report is for information only as required by Pasadena Municipal Code ("PMC") Section 4.08.150 for any emergency purchase where the expenditure exceeds \$250,000.

BACKGROUND:

The Pasadena Water and Power Department ("PWP") owns and operates Gas Turbine 3 ("GT-3"), a General Electric LM6000 PC combustion turbine located at the Glenarm Power Plant ("Plant"). GT-3 is one of five generating units at the Plant and accounts for just over 44 megawatts ("MW") of the facility's overall 200 MW of local generation capacity.

The internal components of the combustion turbines are visually inspected twice a year using a borescope. The borescope is an optical instrument with a small camera mounted on a flexible tube that is used to perform a visual inspection of components that would otherwise require engine disassembly through strategically located inspection ports. As part of the routine maintenance at the generation facility, borescope inspections on the LM6000 units are performed twice a year.

The local generation units at the Glenarm Power Plant experienced a substantial increase in operational hours due to the Eaton Fire and its subsequent effects on the Southern California Edison system, particularly one of the high-voltage lines that serve as a transmission source for the Pasadena electrical system. Units GT-3 and GT-4 were in service for 2,237 hours from January through March 2025, compared to just 76 hours during the same period in 2024.

On May 13, 2025, Reed Services of Wyoming Inc. ("Reed") performed a borescope inspection of the GT-3 engine. During the inspection, a cracked internal component was discovered. The nature and location of the crack on the engine's combustor was deemed to be severe. As a result, the unit could not be placed back into service until the combustor was replaced.

With the summer months and the correlating increase in the demand for electricity, it is essential that as many of the local electric generating units are ready for immediate use in a safe and operable condition. Moreover, due to Pasadena's limited ability to import electricity, service reliability depends on local generation during times when demand exceeds maximum import capacity. The unavailability of GT-3 impacts the reliability of the City's electrical distribution system and could result in rolling blackouts.

Due to the urgent nature of the repair, staff requested quotes for the repair from Reed and IHI Power Systems Co., Ltd. ("IHI"), a certified repair provider. Both vendors previously provided emergency work to PWP, had the necessary parts available and possess the critical experience necessary to service GT-3. IHI was asked to provide the necessary parts to perform the work. Reed provided a quote to perform the combustor swap on-site for the GT-3 generation Unit. The quotes were sent in late May; however, the start of the project was slightly delayed as the required tooling was not immediately available to perform the work, and terms and conditions were still being negotiated between the City and IHI.

Per PMC 4.08.150 – Emergency Purchases, an exemption from competitive bidding was authorized to award two separate purchase orders with IHI and with Reed to perform emergency services to replace the GT-3 combustor. IHI was awarded a purchase order for \$371,280, which includes a base amount of \$336,000 and a \$35,280 contingency to supply the replacement combustor. Reed was awarded a purchase order for \$181,504 which includes the base amount of \$157,830 and a \$23,674 contingency to perform the work at the site to replace the combustor. Tooling arrived at the site on June 16, 2025, and the engine removal started on June 17, 2025. The work was completed on June 24, 2025.

COUNCIL POLICY CONSIDERATION:

The proposed contract supports the City Council's Strategic Planning Goal to improve, maintain, and enhance public facilities and infrastructure. It also supports the Public Facilities Element of the General Plan by maintaining public facilities to enhance the quality of life of the community.

ENVIRONMENTAL ANALYSIS:

The nature of the work performed by IHI and Reed qualifies for a categorical exemption from CEQA in accordance with Title 14, Chapter 3, Article 19, Section 15301 (Existing Facilities). Section 15301 allows for the categorical exemption from CEQA for repair work on existing publicly owned facilities used to provide electric power that will not result in an increase in capacity or an expansion of existing use. The work on GT-3 will not result in an increase in capacity.

FISCAL IMPACT:

The total cost of the two purchase order contracts, including contingency and this action, is \$552,784. Funding for this action will be addressed by the utilization of existing appropriations from GT-3 and GT-4 Equipment Refurbishment (03186) CIP budget. All costs were expended in FY 2025. There is no impact to the General Fund.

The following table represents a project summary:

Base Amount	\$	493,830
Contract Contingency	\$	58,954
Total Fiscal Impact	\$	552,784

Respectfully submitted,



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