



Agenda Report

May 10, 2021

TO: Honorable Mayor and City Council

FROM: Department of Water and Power

THROUGH: Finance Committee (May 10, 2021)

SUBJECT: AUTHORIZATION TO ENTER INTO A CONTRACT WITH INTEGRATED TURBO MACHINERY, INC. FOR AN AMOUNT NOT TO EXCEED \$479,720 FOR THE REPAIR OF GLENARM TURBINE 5 STEAM TURBINE

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the proposed action is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15301, Existing Facilities; and Section 15302, Replacement or Reconstruction; and that there are no features that distinguish this project from others in the exempt class and, therefore, there are no unusual circumstances;
2. Authorize the City Manager to enter into a contract, without competitive bidding pursuant to City Charter Section 1002(C), contracts for labor, material, supplies, or services available from only one vendor, with Integrated Turbo Machinery, Inc. ("Integrated") for the repair of Glenarm Turbine 5 ("GT-5") steam turbine for an amount not to exceed \$479,720, which includes the base contract amount of \$417,148 and a 15% contingency of \$62,572 to provide for any necessary change orders;
3. Appropriate an additional \$479,720 from the Power Fund to Capital Improvement Project No. 3236 entitled "Power Production Facility Improvements" to fund expenses for this contract; and
4. Grant the proposed contract an exemption for the Competitive Selection process pursuant to Pasadena Municipal Code Section 4.08.049(B) contracts for which the City's best interests are served.

BACKGROUND:

The 71 megawatt ("MW") combined cycle unit, GT-5, is the biggest and most efficient of the five electric generating units located in Pasadena. GT-5 has two electric generating

components. The gas turbine generates 55 MW using natural gas fuel and the steam turbine generates 16 MW using heat from the exhaust gases.

In March of 2021, the steam turbine exhibited a vibration that exceeded the manufacturer's recommendations. Staff contacted Shin Nippon Machinery Co., Ltd. ("Shin Nippon"), the original equipment manufacturer located in Japan. They advised staff to check the eleventh stage turbine blades. Upon inspection, staff discovered that one of the eleventh stage blades had moved from its normal position.

The steam turbine is inoperable at this time. As a result, the generating capacity of GT-5 is reduced to 55 MW from 71 MW. It is necessary to repair the steam turbine as quickly as possible to maintain the reliability of Pasadena's electric system, meet back-up capacity requirements and also generate revenues. It is highly desirable to repair the unit before summer when the electric demand is highest.

Integrated, located in Montebello, California, is an authorized Shin Nippon west coast service facility for this steam turbine. Shin Nippon has provided guidance to Integrated regarding scope of work, which Integrated used to provide a quote to PWP on May 4 in an amount of \$417,148. It is possible that when the turbine is disassembled, additional repairs may be needed. Staff will keep a close eye on repairs and assist Integrated to contain repair cost. Integrated will supply the field service, tooling, transportation and equipment necessary to remove the upper turbine case, remove and transport the turbine rotor to the shop to allow for the blade replacement, and balancing necessary after the repair is complete.

Shin Nippon has agreed to provide three new blades and remote technical assistance to facilitate the repair work free of charge.

There have not been any contracts or purchase orders in place between Integrated and the City in the past five years. Staff is not aware of any local vendors capable of performing this work. It is in the City's best interest to have this work performed by the authorized repair shop for this piece of equipment. Integrated is supported by Shin Nippon engineering group and are singularly equipped to perform this work efficiently and correctly under the guidance of the manufacturer.

COUNCIL POLICY CONSIDERATION:

The proposed contract supports the City Council 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 Integrated 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 publically-owned facilities used to provide electric power that will not result in an increase in capacity or an expansion of existing use. The repair of the GT-5 Steam Turbine adheres to these guidelines. The proposed action is also categorically exempt pursuant to Section 15302, which exempts from CEQA the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced.

FISCAL IMPACT:

The maximum cost of this action will be \$479,720, which includes a base contract amount and a 15% contingency to provide for any unforeseen change orders. Funding for this action will be addressed by the recommended additional appropriation for the expenses of this contract. It is expected that the entire amount of \$479,720 will be spent in the current fiscal year.

The approval of this action will have no impact to other operational programs or capital projects.

Respectfully submitted by,



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Approved by:



STEVE MERMELL
City Manager