



# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE: OCTOBER 28, 2024**

**SUBJECT: APPROVE SERVICES AGREEMENT TO REQUEST FOR PROPOSAL NO. 2370, WITH TRANSCANADA TURBINES, INC. OF HOUSTON, TEXAS TO PERFORM BUSHING MAINTENANCE ON THE GAS TURBINE AT CLEARWATER POWER PLANT IN THE AMOUNT OF \$192,338.77 WITH A 25% CONTINGENCY AMOUNT OF \$48,084.69, FOR A TOTAL CONTRACT AMOUNT NOT TO EXCEED \$240,423.46.**

**ISSUE:**

Consider approval of a Services Agreement to Request for Proposal No. 2370, with TransCanada Turbines, Inc. of Houston, Texas to perform bushing maintenance on the gas turbine at Clearwater Power Plant in the amount of \$192,338.77 with a 25% contingency amount of \$48,084.69, for a total contract amount not to exceed \$240,423.46.

**RECOMMENDATIONS:**

That the Board of Public Utilities:

1. Approve a Services Agreement to Request for Proposal No. 2370, with TransCanada Turbines, Inc. of Houston, Texas to perform bushing maintenance on the gas turbine at Clearwater Power Plant in the amount of \$192,338.77 with a 25% contingency amount of \$48,084.69, for a total contract amount not to exceed \$240,423.46; and
2. Authorize the City Manager, or designee, to execute the services agreement with TransCanada Turbines, Inc., including making non-substantive changes.

**BACKGROUND:**

In September 2010, Riverside Public Utilities (RPU) acquired the Clearwater Power Plant (Clearwater) that was originally commissioned in 2005. Clearwater is a combined cycle power plant that uses both a gas and steam turbine together to produce electricity. The waste heat from the 22-megawatt LM2500 gas turbine is captured and sent to the steam turbine to generate an additional 8 megawatts of electricity without requiring additional fuel. In total, Clearwater produces 30 megawatts of efficient power.

The compressor section of the Clearwater gas turbine includes seven stages of variable stator vanes (VSVs), which play a crucial role in regulating airflow to optimize power production and prevent turbulence and compressor surges during turbine operations. These VSVs are pivotal

components ensuring safe and efficient turbine performance. The following photo (Figure 1) and illustration (Figure 2) highlight the seven stages of VSVs in the gas turbine.

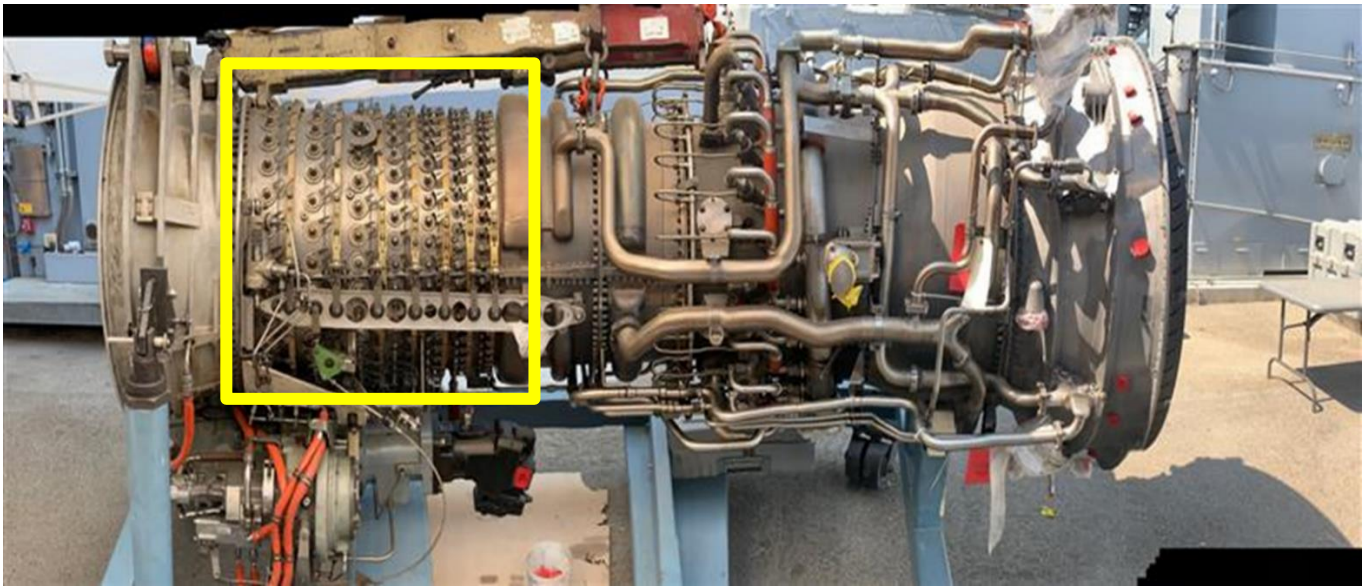


Figure 1. Photo of the Clearwater GE LM2500 Gas Turbine removed for service.

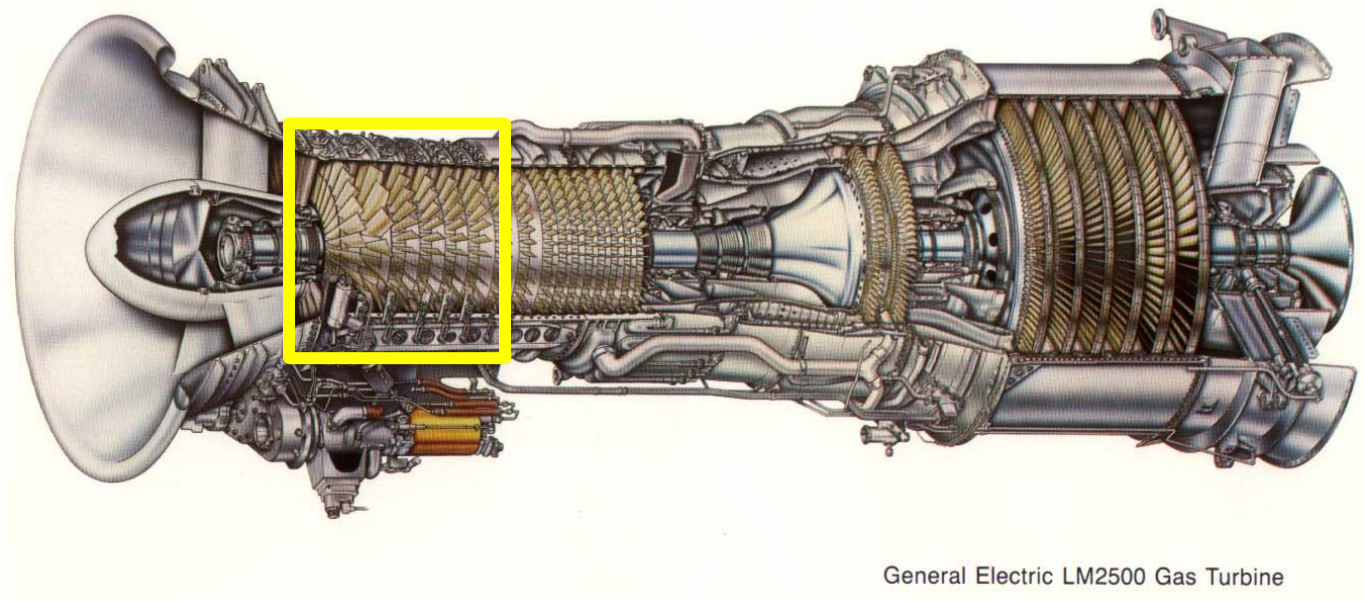


Figure 2. Technical illustration of the GE LM2500 Gas Turbine.

During a routine inspection, an abnormal amount of movement and wear was detected on several of the VSV bushings. The VSVs are designed with over 300 bushings that play a vital role in ensuring smooth operations by absorbing transmitted vibrations. The current wear on the bushings is expected as part of normal operations and because of effective maintenance practices, they have performed reliably for over 19 years.

Continuing to operate long term with worn bushings can result in significant turbine damage and expensive repairs. To address this, staff recommends completing the bushing replacement and maintenance during the scheduled outage in December 2024.

**DISCUSSION:**

On April 23, 2024, the City’s Purchasing Division, on behalf of Riverside Public Utilities (RPU), posted Request for Proposal (RFP) No. 2370 on PlanetBids for a qualified vendor to replace the compressor bushings of the gas turbine at Clearwater. No questions were received, and RPU did not issue any addenda. The notification summary is shown in the following table:

**Table 1. RFP Notification Summary**

Action	Number of Vendors
External Vendors Notified	133
City of Riverside Vendors Notified	15
Vendors Who Downloaded the RFP	11
Proposals Received	2

Only four companies worldwide (Japan, Canada, Germany, and U.S.) are qualified and authorized to perform the specialized gas turbine maintenance services required at Clearwater. All four vendors were notified via PlanetBids.

The evaluation criteria was formulated with the goal of identifying the best proposal and a competitive price while also including an emphasis on approach and methodology. Given that the authorized companies are similar in qualifications, the bidder’s ability to adhere to outage schedules, minimize repair time, and ensure parts availability was strongly considered alongside pricing. The RFP evaluation criteria is listed below:

- a. Qualifications and Experience (15% - 15 points)
- b. Approach and Methodology (40% - 40 points)
- c. Price (45% - 45 points)

On May 23, 2024, two proposals were received in response to RFP No. 2370 and the results are summarized in Table 2 below:

**Table 2. Proposals Received**

Vendor	Location	Average Score (100 max)	Amount	Rank
TransCanada Turbines, Inc.	Houston, TX	86.5	\$192,338.77	1
GE Vernova Operations, LLC.	Houston, TX	81.4	\$266,008.39	2

After a thorough evaluation of the two proposals, TransCanada Turbines, Inc. (TCT) was selected as the highest rated proposal with the lowest competitive price. TCT is an authorized service provider that has performed excellent work on previous gas turbine projects and is capable of meeting Riverside’s outage schedules and minimizing repair times.

Since this is the first time that maintenance will be performed on the VSV bushings located in the compressor section, additional repairs may be necessary once disassembly begins. A complete assessment can only be made after inspecting the internal components. The success of the project requires prompt decisions and approval of reasonable changes, as delays could increase costs and extend Clearwater’s non-operational period.

Clearwater’s availability is crucial for meeting mandated Resource Adequacy (RA) requirements during the months of March through November. If Clearwater were to become unavailable during these months, replacement capacity would need to be procured from the energy market to make up for the loss. Currently, the market cost to replace 30 megawatts of local summer RA is at least \$6 million dollars per year. Hence, this maintenance outage will be scheduled for December 2024

to allow for the maximum repair time window (when the Clearwater facility’s capacity is not needed to meet RPU RA requirements).

Normally, this project could face delays if revisions to the scope require an amendment before any further work can commence. This amendment approval process can take up to 30 days to complete and simultaneously cause work to cease until the amendment is fully executed. Such a delay would extend the outage and require demobilization of the TCT field crew, further postponing the work. Therefore, to help protect against potential extended delays, a contingency option of 25% of the proposal amount was negotiated and included in the agreement (Table 3). This contingency is a precautionary measure only, intended to cover minor, unforeseen maintenance needs. It is not a guaranteed payment and will only be utilized with RPU’s prior approval. Unused funds will remain in the RPU - Generation budget.

**Table 3. Best and Final Offer with 25% Contingency**

Vendor	Location	Best and Final Offer	Contingency Option	Total
TransCanada Turbines, Inc	Houston, TX	\$ 192,338.77	\$48,084.69	\$240,423.46

Purchasing Resolution 24101 Section 508 states, “Contract procured through Formal Procurement shall be awarded by the Awarding Entity to the Lowest Responsive and Responsible Bidder, except that...(c) Contracts procured through Formal Procurement for Services or Professional Services, where a Request for Proposals or Request for Qualifications was used to solicit Bids, shall be awarded by the Awarding Entity in accordance with the evaluation criteria set forth in the Request for Proposals or Request for Qualifications...”

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 24101.

**STRATEGIC PLAN ALIGNMENT:**

This item contributes to the following strategic priorities and goals from the Envision Riverside 2025 Strategic Plan:

**Strategic Priority No. 5 - High Performing Government** and Goal 5.4 – Achieve and maintain financial health by addressing gaps between revenues and expenditures and aligning resources with strategic priorities to yield the greatest impact.

**Strategic Priority No. 6 - Infrastructure, Mobility & Connectivity** and Goal 6.2 – Maintain, protect, and improve assets and infrastructure within the City’s built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

The item aligns with EACH of the five cross-cutting threads as follows:

1. **Community Trust** – Ensuring that Clearwater operates reliably during critical periods and provides electricity to RPU’s electric customers serves the greater public good.
2. **Equity** – This item ensures that RPU’s power plants can safely and effectively operate and provide reliable electricity benefiting the entire City and all customers.

3. **Fiscal Responsibility** – Riverside is a prudent steward of public funds and ensures responsible management of the City’s financial resources while providing quality public services to all.
4. **Innovation** – Performing the original equipment manufacturers recommended bushing maintenance on the Clearwater gas turbine is the best practice and ensures it will continue to operate with high reliability.
5. **Sustainability & Resiliency** – Clearwater must operate during the most critical times of the year when the demand for electricity is high. Performing the turbine bushing maintenance prevents the potential of a catastrophic failure and supports the goal of sustaining highly reliable power plant operations.

**FISCAL IMPACT:**

The total fiscal impact is \$240,423.46. Sufficient funds are available in the Public Utilities Maintenance Generating Plant Account No. 6120140-424131.

Prepared by: Scott M. Lesch, Utilities Assistant General Manager/Power Resources  
Approved by: David A. Garcia, Utilities General Manager  
Certified as to  
availability of funds: Kristie Thomas, Finance Director/Assistant Chief Financial Officer  
Approved by: Rafael Guzman, Assistant City Manager  
Approved as to form: Phaedra A. Norton, City Attorney

**Attachments:**

1. Services Agreement with TransCanada Turbines, Inc.
2. Award Recommendation
3. Presentation