

CLEARWATER GAS TURBINE BUSHING MAINTENANCE SERVICES AGREEMENT WITH TRANSCANADA TURBINES

Riverside Public Utilities

Board of Public Utilities
October 28, 2024

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1

BACKGROUND

1. Clearwater Power Plant (Clearwater)
 - a. Commissioned in 2005
 - b. Acquired by Riverside Public Utilities (RPU) in 2010
 - c. Combined cycle power plant that uses both a gas and steam turbine to produce 30 megawatts of efficient power
2. GE LM2500 Gas Turbine – Variable Stator Vanes (VSVs)
 - a. Compressor section of the gas turbine includes 7 stages of VSVs
 - b. Designed with over 300 bushings that absorb transmitted vibrations
 - c. Prevents turbulence and compressor surges during turbine operations
 - d. Crucial role in regulating airflow to optimize power production



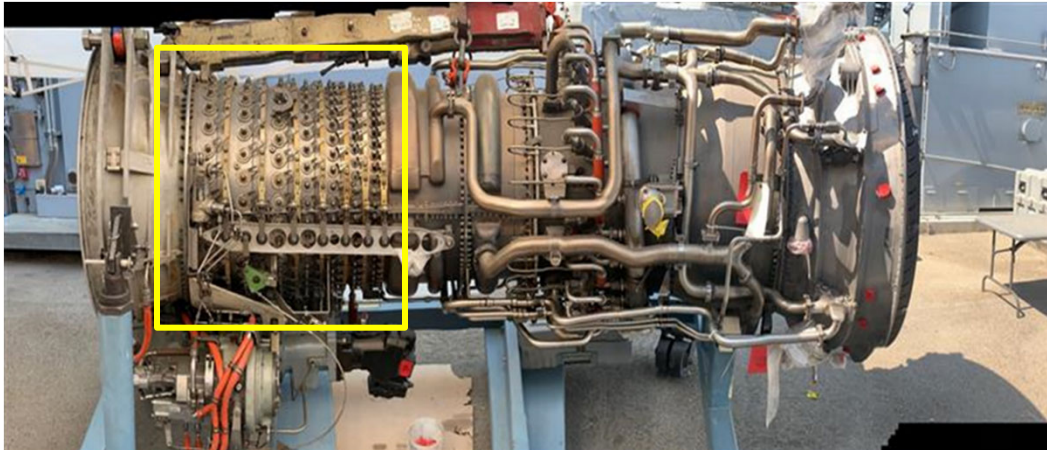
2

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2

BACKGROUND

Clearwater GE LM2500 Gas Turbine



3

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3

BACKGROUND

1. During routine inspection, an abnormal amount of movement and wear was detected on several VSV bushings
 - a. The bushings have performed reliably for over 19 years
 - b. Continuing to operate long term with worn bushings can result in significant turbine damage and expensive repairs
2. Availability is crucial for meeting customer demands and mandated Resource Adequacy (RA) requirements
3. Staff recommend that bushing replacement and maintenance be performed during scheduled outage in December 2024



4

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4

DISCUSSION – RFP 2370

1. Request for Proposal (RFP) No. 2370 posted April 23, 2024
 - a. 133 external vendors notified
 - b. 15 City of Riverside vendors notified
 - c. 10 prospective bidders downloaded the RFP
 - d. Only 4 authorized vendors worldwide (Japan, Canada, Germany, U.S.)
2. On May 23, 2024, two proposals were received:

Vendors	Location	Proposal Amount	Rank
TransCanada Turbines, Inc.	Houston, TX	\$ 192,338.77	1
GE Vernova Operations, LLC.	Houston, TX	\$ 266,008.39	2



5

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5

DISCUSSION – RFP 2370

1. TransCanada Turbines, Inc. (TCT)
 - a. Highest rated proposal
 - b. Authorized vendor and able to meet outage schedule
 - c. Includes a contingency option of up to 25% as a precaution only and is not guaranteed payment

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



6

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6

DISCUSSION – RFP 2370

Justification for 25% Contingency

1. Additional repairs may be discovered during disassembly
 - a. Amendments could take up to 30 days to complete
 - b. Success of this project requires prompt decisions
2. Delays could increase costs and extend non-operational period
 - a. Current market cost of replacement summer RA is at least \$6 million dollars per year
3. Contingency option
 - a. Does not guarantee payment nor increase cost for the project
 - b. Covers unforeseen and reasonable changes to the project
 - c. Requires Riverside's authorization prior to any project changes



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7

STRATEGIC PLAN ALIGNMENT



Strategic Priority 5 - High Performing Government

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 6 - Infrastructure, Mobility & Connectivity

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.

Cross-Cutting Threads



Community Trust



Equity



Fiscal Responsibility



Innovation



Sustainability & Resiliency



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8

8

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.



9

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