



## **CITY OF GLENDALE, CALIFORNIA REPORT TO THE CITY COUNCIL**

### **AGENDA ITEM**

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Report: Change Orders to Contract with Wood Group Pratt & Whitney Industrial Turbine Services, LLC

1. Motion Authorizing Change Order No. 1 to Contract No. C106875 with Wood Group Pratt & Whitney Industrial Turbine Services, LLC for emergency off-site repair of two Pratt & Whitney gas generators used at the Grayson Power Plant in an amount not to exceed \$1,802,000
2. Resolution Dispensing with Competitive Bidding and Authorizing Change Order No. 2 to Contract No. C106875 with Wood Group Pratt & Whitney Industrial Turbine Services, LLC increasing the contract amount by \$200,000 and extending the term of the contract by one additional year for the purchase of additional spare/replacement parts and services on "as needed" basis for the maintenance and limited repair, if needed, of other Pratt & Whitney equipment and related systems in operation at the Grayson Power Plant.

### **COUNCIL ACTION**

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**Item Type:** Action Item

**Approved for** February 2, 2021 **calendar**

### **ADMINISTRATIVE ACTION**

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**Submitted by:**

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**Prepared by:**

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**Reviewed by:**

Michele Flynn, Director of Finance

Michael J. Garcia, City Attorney

**Approved by:**

Roubik R. Golanian, P.E., Interim City Manager

## **RECOMMENDATION**

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Glendale Water & Power (GWP) respectfully recommends that the City Council authorize Change Order No. 1, in the amount of \$1,802,000 to the Contract with Wood Group Pratt & Whitney Industrial Turbine Services, LLC (WGPW) for emergency off-site repairs to two Grayson Power Plant Unit 8A and 8BC Pratt & Whitney gas generators. This is needed to undertake essential, emergency repairs so that the City can maintain reliable electric service during peak electrical load while meeting reserve requirements.

GWP further recommends that the City Council dispense with competitive bidding and authorize Change Order No. 2 to the above-referenced contract with WGPW to extend the contract term by one additional year for a total term of four years (through August 2022), and increase the contract amount by \$200,000 for the procurement of “as needed” spare/replacement parts and services for the maintenance and limited repair of other City of Glendale owned Pratt & Whitney equipment and related systems in operation at the Grayson Power Plant.

## **BACKGROUND/ANALYSIS**

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GWP operates and maintains Pratt & Whitney (PW) brand equipment at the Grayson Power Plant (GPP), including PW model GG4 gas generators and PW model FT4 free (or power) turbines. When one of each (gas generator and power turbine) are coupled together, they become the gas turbines that power the GPP Units 8A and 8BC electric generators. Unit 8A requires one gas turbine to operate while Unit 8BC requires two. City of Glendale owns a total of four GG4 gas generators and three FT4 free turbines. Three of each are required to be in-service, at any one time, in order to generate power from both GPP Units 8A and 8BC. The fourth GG4 gas generator is kept onsite as a spare. The City does not own a spare FT4 free turbine.

On July 10, 2018, the City Council adopted a resolution dispensing with competitive bidding and authorizing the execution of a Labor and Materials Contract with (WGPW) to supply parts and perform necessary repairs to the City’s PW power plant equipment. The City Council determined it was in the City’s best interest to contract with WGPW as it is the original equipment manufacturer of the PW equipment with the experience, technical expertise, and the original design and manufacturing specifications needed to work on the equipment. WGPW handles spare part sales and all technical support for this equipment, and given the age of Units 8A and 8BC, required expertise and as-needed spare parts are not available from a third party vendor. At the time, GPP Unit 8A required work (mainly to the free turbine and gas-fuel control valve) that was estimated to cost about \$400,000; GWP had also estimated needing an additional \$200,000 for as-needed parts and services for the maintenance and repair of other PW equipment located at the GPP. A three-year equipment repair, parts, and services contract was executed between the City and WGPW for an amount not-to-exceed \$600,000. To date, the following work has been completed and funds expended or already committed through this contract.

<b>Line</b>	<b>Description of Work</b>	<b>Amount</b>
1	Roundtrip shipping, disassembly, inspection, repair, reassembly, and testing of one (1) FT4 free turbine s/n P600581	\$228,538.21
2	Roundtrip shipping, disassembly, inspection, repair, reassembly, and testing of three (3) gas-fuel modulating control valves	\$164,230.56
3	Field support to conduct a controls audit and alignment of Unit 8A	\$30,692.58
4	Field support to conduct a controls audit and startup of Unit 8BC	\$22,169.27
5	Purchase of spare/replacement TT7 temperature probes	\$2,181.72
6	Field support to troubleshoot operational issues with both Units 8A and 8BC	\$10,414.70
7	Purchase of spare/replacement N3 speed sensors	\$23,043.23
8	One-way shipping and condition assessment of two (2) GG4 gas generators	\$118,000.00
<b>Total Amount Expended/Committed</b>		<b>\$599,270.27</b>
<b>Remaining Balance</b>		<b>\$729.73</b>

In June 2020, one of the City's PW GG4 gas generators went out of service due to excessive/large metal chips that were detected and found in the lubricating oil systems – an early sign of excessive wear and tear and/or a failed bearing or gear – causing a forced outage of Unit 8BC. This Unit remains to be out of services as the spare gas generator is also out of service due to mechanical issues and concerns. In order to determine the extent of work needed to resolve these concerns, both gas generators were shipped to the WGPW overhaul and repair facility located in Bloomfield, Connecticut for a condition assessment. The assessment included borescope and visual inspections, a total air-flow check, disassembly of the gas generators into modules, reassembly, reporting of findings, and recommendations with cost estimates. The results of the assessment are that both gas generators do require repairs and replacement of parts before they can be returned to service. The findings included, but were not limited to:

- metal chips in the gearbox and oil line for one for the gas generators;
- worn, corroded, pitted/dented, scored, and failed bearings;
- worn and corroded gears;
- worn, chipped, and scored seals;
- cracked, broken, diffuser case flange for the gas generators;
- cracked vanes for the gas generators;
- damaged blades;
- cracked and broken/damaged duct and fairing;
- missing, loose, and/or damaged/broken hardware i.e. nuts/bolts/washers;
- corroded and scored main oil pump components;
- cracked, missing, and/or burnt coatings;
- cracked and/or worn combustion chamber components; and,
- other discrepancies that require additional disassembly work to inspect.

The total cost estimate of the repairs needed to reliably bring the two gas generators back into service totals \$1,802,000. This amount includes all labor, material, taxes, consumables, shipping, and a five percent contingency to cover limited additional repairs (discovery items) and material costs needed as the gas generators are further disassembled to complete the known repairs. The repair work includes inspection, supply of replacement parts, repairs, testing, and shipping. A summary breakdown of the total repair cost estimate is as follows:

<b>Description</b>	<b>Total Cost Estimate</b>	<b>Remarks</b>
Labor	\$548,597.00	For inspection, repairs and testing
Material	\$1,029,432.53	Replacement parts needed for repairs
Tax	\$105,516.83	2021 Glendale, Ca Use Tax of 10.25%

Consumables	\$13,875.69	Includes expendables need for repairs and, fuel and oil for testing
Shipping	\$18,000.00	Total for round-trip shipping
Sub-total	\$1,715,422.05	
Contingency	\$86,577.95	Approximately 5% to cover limited additional repairs (discovery items) and material costs that may be needed
<b>Grand Total</b>	<b>\$1,802,000.00</b>	

These repairs are necessary to allow both GPP Units 8A and 8BC to be made available for GWP to reliably maintain electric service to the public, particularly during the summer peak period while meeting reserve requirements. Units 8A and 8BC, when fully operational, provide approximately 34 and 68 megawatts (MW), respectively, of net capacity to serve peak load and maintain reserves. The repair work, shipping of the gas generators back from Connecticut, and reinstallation of the gas generators is expected to require five months. Thus, it is essential that the work be undertaken right away.

GWP is further recommending that the City Council dispense with competitive bidding and authorize a separate Change Order No. 2 to the Contract, to extend the contract term by one additional year, through August of 2022. This extension would be subject to the City's rights under the contract to terminate for convenience at any time. Change Order No. 2 would add an additional \$200,000 to the total contract amount for "as needed" spare/replacement parts and services. By doing so, GWP can continue to procure spare/replacement parts and services from WGPW on an "as needed" basis to properly maintain and perform limited repairs to, if needed, the PW equipment and related systems at the GPP until August of 2022.

Per the City Council's direction on December 15, 2020, GWP is currently evaluating various alternatives for the modernization of the Grayson Power Plant, including an alternative to refurbish Units 8A and 8BC. If the City Council ultimately elects to proceed with an alternative that includes refurbishment of Units 8A and 8BC, the gas generator repairs authorized under WGPW Change Order No. 1 will reduce the amount of work that would otherwise be necessary as part of the refurbishment. If the City Council ultimately elects to demolish Units 8A and 8BC as part of a repowering of the Grayson Power Plant, the gas generator repair work under Change Order No. 1 would still have been necessary in order to keep the units reliably in operation during the upcoming peak season and would further increase the salvage value of the gas generators. Change Order No. 2 allows GWP to continue purchasing parts and services from WGPW on an "as needed" basis for the proper maintenance and limited repair, if needed, of the Unit 8A and 8BC PW equipment and related systems until August 2022 or sooner if so terminated.

The Glendale City Charter, Article VI, Section IX, exempts from competitive bidding “[c]ontracts for labor, material, supplies or services which are available from only one vendor;” and “[c]ontracts for professional or unique services.” The same Charter provision specifies that, “[u]pon recommendation of the City Manager, the council may dispense with competitive bidding for any contract when it determines that it is in the best interests of the city so to do and acts by resolution setting forth the reason for such action.” WGPW is the original equipment manufacturer of the PW equipment with the experience, technical expertise, and the original design and manufacturing specifications needed to work on the equipment. WGPW handles spare part sales and all technical support for this equipment. Given the age of Units 8A and 8BC, the required expertise and “as needed” spare parts are not available from a third party vendor. Thus, it is in the City’s best interest to dispense with competitive bidding for the above-referenced work.

This proposed action is categorically exempt from the requirements of the California Environmental Quality Act (CEQA) pursuant to Section 15301 of Title 14 of the California Code of Regulations (“operation, repair, maintenance . . . or minor alteration of existing public or private structures, facilities, mechanical equipment . . . involving negligible or no expansion of existing or former use”).

## **FISCAL IMPACT**

The gas generator repair work cost estimate is \$1,802,000. An additional \$200,000 is recommended for “as needed” parts and services. Change Order Nos. 1 and 2 increase the contract amount by a total amount of \$2,002,000 for a new total not-to-exceed contract amount of \$2,602,000.

GWP Power Plant Capital Improvement Program budget for Fiscal Year 2020-21 has sufficient funds available in the following accounts and amounts:

<b>Account Description</b>	<b>Account No.</b>	<b>Estimated Amount</b>
Other Improvements, Electric Depreciation Fund, GWP, Projects, Production Plant FERC, PM Emergency Repairs	51200-5830-GWP-0020-P0000-T0000-F3000  PL String: P30059-IMPROVEMNT-3432	\$268,754
Other Improvements, Electric Depreciation Fund, GWP, Projects, Production Plant FERC, PM Unit #8 Gas Turbine Spare Engine	51200-5830-GWP-0020-P0000-T0000-F3000  PL String: GWP000081N-IMPROVEMNT-3432	\$800,000
Other Improvements, Electric Depreciation Fund, GWP, Projects, Production Plant FERC, PM Overhaul Reserve Gas Turbine	51200-5830-GWP-0020-P0000-T0000-F3000  PL String: P30021-IMPROVEMNT-3432	\$733,246
Other Improvements, Electric Depreciation Fund, GWP, Projects,	53300-5830-GWP-0020-P0000-T0000-F3000	\$200,000

Production Plant FERC, PM Repairs to Unit 8A & 8BC	PL String: P30019-OTHER-3432	
<b>Total Available Funding</b>		<b>\$2,002,000</b>

## **ALTERNATIVES**

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Alternative 1: The City Council may choose to authorize Change Order No. 1 to Contract No. C106875 with Wood Group Pratt & Whitney Industrial Turbine Services, LLC and may authorize the Interim City Manager, or his designee, to execute Change Order No. 2 as recommended herein.

Alternative 2: The City Council may decline to authorize Change Order No. 2 for the “as needed” spare/replacement parts and services and contract extension. If so, only the emergency repairs will be completed. The City will not purchase any spare/replacement parts or “as needed” services, and the contract with WGPW will terminate in August 2021.

Alternative 3: The City Council may consider any other alternative not proposed by staff.

## **CAMPAIGN DISCLOSURE**

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In accordance with the City Campaign Finance Ordinance No. 5744, the following are the names and business addresses of the members of the board of directors, the chairperson, CEO, COO, CFO, Subcontractors and any person or entity with more than 10% interest in the company proposed for contract in this Agenda Item Report:

The completed Campaign Disclosure for Wood Group Pratt & Whitney Industrial Turbine Services, LLC is attached hereto as Exhibit 1.

## **EXHIBIT(S)**

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Exhibit 1: Campaign Disclosure for Wood Group Pratt & Whitney Industrial Turbine Services, LLC