



Department Source: City Utilities - Water and Light

To: City Council

From: City Manager & Staff

Council Meeting Date: March 4, 2024

Re: Authorizing contractual service agreements with Innio Jenbacher North America LLC for spare parts and maintenance services for Columbia Landfill Generator Unit 3 and Unit 4.

Executive Summary

Staff has prepared for Council consideration a resolution authorizing the City Manager to execute an agreement with Innio Jenbacher North America LLC for spare parts and maintenance services for Columbia Landfill Generator Unit 3 and a separate agreement for Columbia Landfill Generator Unit 4.

Discussion

The City owns and operates the Landfill Gas to Energy Plant which generates electricity from landfill gas. The plant was originally equipped with three Jenbacher engines with a fourth engine currently being installed. Unit 3 had a major engine failure in 2023 requiring a complete replacement of the engine block. Unit 4 is a brand new unit. Each unit is capable of generating approximately 1000 kW of energy per hour. The units have a slightly different design and therefore different service requirements and costs. The vendor requested a separate agreement for each unit.

Innio Jenbacher is the sole source for parts and original equipment manufacturer for service. In the past, a sole source request was approved through Purchasing each year to maintain the units. Authorizing the City Manager to execute these long term agreements will eliminate the yearly sole source process and ensure proper maintenance of the replaced unit and the new unit with spare parts and services for maintenance activities throughout the 60,000 operating hour life of the engines.

The annual operating hours for each unit are dependent on actual landfill gas production. The existing units operate approximately 5,000 hours per year. This agreement will be in effect for 15 years or to the Performance End Date at 60,000 hours, whichever is sooner. There will be maintenance activity costs for each unit every fiscal year, but the actual maintenance activities necessary will be dependent on the operational hours. The tables below show some of the major maintenance milestones and possible costs in an approximate fiscal year for each of the units.



City of Columbia

701 East Broadway, Columbia, Missouri 65201

Examples of the major maintenance milestones and costs for Unit 3:

Maint. Activity	Year Hours	2024		2025		2029		2031		2035	
		5000	10000	10000	30000	40000	60000				
2K	\$ 4,226.15	2	\$ 8,452.30	1	\$ 4,226.15	2	\$ 8,452.30	1	\$ 4,226.15	2	\$ 8,452.30
6K	\$ 4,298.55		\$ -	1	\$ 4,298.55		\$ -	1	\$ 4,298.55		\$ -
10K	\$ 35,860.29		\$ -	1	\$ 35,860.29		\$ -		\$ -		\$ -
20K	\$ 158,405.40		\$ -		\$ -		\$ -		\$ -		\$ -
30K	\$ 60,822.73		\$ -		\$ -	1	\$ 60,822.73		\$ -		\$ -
40K	\$ 164,153.79		\$ -		\$ -		\$ -	1	\$ 164,153.79		\$ -
Plugs 9k	\$ 15,172.50		\$ -	1	\$ 15,172.50	1	\$ 15,172.50	1	\$ 15,172.50		\$ -
60K	\$ 310,900.00		\$ -		\$ -		\$ -		\$ -	1	\$ 310,900.00
(Total)			\$ 8,452.30		\$ 59,557.49		\$ 84,447.53		\$ 187,850.99		\$ 319,352.30

Examples of major maintenance milestones and costs for Unit 4:

Maint. Activity	Year Hours	2024		2025		2029		2031		2035	
		5000	10000	10000	30000	40000	60000				
2K	\$ 4,226.15	2	\$ 8,452.30	1	\$ 4,226.15	2	\$ 8,452.30	1	\$ 4,226.15	2	\$ 8,452.30
6K	\$ 4,298.55		\$ -	1	\$ 4,298.55		\$ -	1	\$ 4,298.55		\$ -
10K	\$ 35,343.69		\$ -	1	\$ 35,343.69		\$ -		\$ -		\$ -
20K	\$ 157,686.45		\$ -		\$ -		\$ -		\$ -		\$ -
30K	\$ 71,167.20		\$ -		\$ -	1	\$ 71,167.20		\$ -		\$ -
40K	\$ 163,434.84		\$ -		\$ -		\$ -	1	\$ 163,434.84		\$ -
Plugs 9k	\$ 15,172.50		\$ -	1	\$ 15,172.50	1	\$ 15,172.50	1	\$ 15,172.50		\$ -
60K	\$ 310,900.00		\$ -		\$ -		\$ -		\$ -	1	\$ 310,900.00
(Total)			\$ 8,452.30		\$ 59,040.89		\$ 94,792.00		\$ 187,132.04		\$ 319,352.30

All maintenance costs are anticipated and included in annual operating budgets in the past and moving forward, these are not new expenses. Staff recommends authorizing the City Manager to execute these agreements to ensure long term maintenance and operation of the engines for the most effective use of landfill methane gas. The cost for maintenance during fiscal year 2024 is \$8,452.30 for each unit. Life of contract costs for Unit 3 is approximately \$959,044.30. Life of contract costs for Unit 4 is approximately \$966,917.67. The agreements include a price escalation calculation.

Fiscal Impact

Short-Term Impact: \$8,452.30 total FY2024 for each unit. \$59,557.49 in FY2025 for Unit 3. \$59,040.89 in FY2025 for Unit 4.

Long-Term Impact: Approximately \$891,034.51 for the remainder of the Unit 3 contract period plus price escalations. Approximately \$899,424.48 for the remainder of the Unit 4 contract period plus price escalations.



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Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Reliable and Sustainable Infrastructure, Secondary Impact: Organizational Excellence, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Not applicable, Tertiary Impact: Not Applicable

Legislative History

Date	Action
None	None

Suggested Council Action

Approve the resolution.