



INLET GUIDE VANE UPGRADES ON THE GAS TURBINES AT SPRINGS SERVICES AGREEMENT WITH GE VERNOVA

Riverside Public Utilities

Board of Public Utilities
November 18, 2024

RiversideCA.gov

1

BACKGROUND

1. Springs Power Plant (Springs)
 - a. Commissioned in 2002 and consists of four gas turbine engines.
 - b. Capability to produce a combined total of 36 net megawatts.

2. Inlet Guide Vane (IGV) System
 - a. Crucial role in regulating airflow entering the compressor section of the turbines.
 - b. Ensures safe and efficient turbine performance during operation.
 - c. Each turbine has one IGV actuator and one IGV driver which are vital operational components.

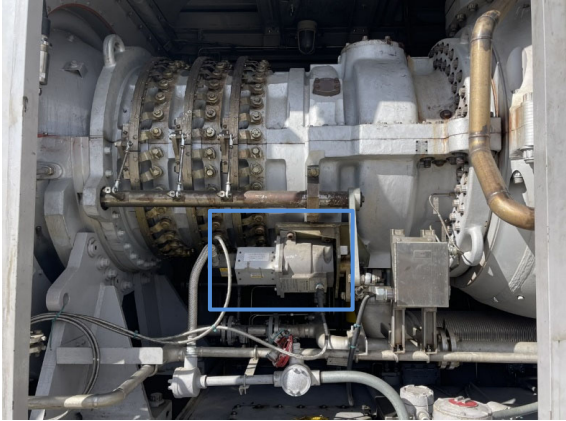


2

RiversideCA.gov

2

BACKGROUND



Springs IGV Actuator



Springs IGV Driver



3

RiversideCA.gov

3

BACKGROUND CONT.

1. Existing Actuators and Drivers
 - a. Have been in service for over 20 years
 - b. Failing more frequently based on recent maintenance history
 - c. Original Equipment Manufacturer is no longer supporting these products
 - d. Total of 8 actuators and 8 drivers installed at Springs:
 - i. 4 are components of the IGV System
 - ii. 4 are components of the Combustion Air Valve (CAV) Assembly
 - e. Currently only one spare actuator and one spare driver on site
 - f. Market cost to replace 36 megawatts of local RA is at least \$8 million dollars per year



4

RiversideCA.gov

4

BACKGROUND CONT.

1. Original Project Scope
 - a. Upgrade all 8 actuators and 8 drivers
 - b. Estimated cost is over \$2 million dollars

2. Revised Project Scope
 - a. Upgrade only the 4 IGV actuators and 4 IGV drivers
 - b. Reduces the total project cost by \$1.2 million dollars
 - c. Existing IGV actuators and drivers will be used as spares for the CAV assembly
 - d. Ensures availability of Springs until forecasted retirement in 2030



5

RiversideCA.gov

5

DISCUSSION – RFP 2357

1. Request for Proposal (RFP) No. 2357 posted March 21, 2024
 - a. 103 external vendors notified
 - b. 12 City of Riverside vendors notified
 - c. 10 prospective bidders downloaded RFP

2. On May 2, 2024, one proposal was received:

Vendor	Location	Average Score (100 max)	Amount	Rank
GE Vernova Operations, LLC.	Houston, TX	94.75	\$804,113.70	1

3. GE Vernova Operations, LLC. (GE Vernova)
 - a. Original Equipment Manufacturer
 - b. Aligned closely with the engineers estimate of \$800,000
 - c. Highly qualified to perform this specialized work
 - d. Capable of meeting Riverside's outage schedules and repair times




6

RiversideCA.gov


6

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



7


RiversideCA.gov

7

RECOMMENDATIONS

That the Board of Public Utilities:

1. Approve a Services Agreement to Request for Proposal No. 2357, with GE Vernova Operations, LLC. of Houston, Texas to perform Inlet Guide Vane upgrades on the gas turbines at Springs Power Plant in the amount of \$804,113.70;
2. Authorize the City Manager, or his designee, to execute the services agreement with GE Vernova Operations, LLC., including making non-substantive changes; and
3. Approve Work Order No. 2505220 which includes a 10% contingency of \$80,411.37 for a total amount of \$884,525.07.



8

RiversideCA.gov

8