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REPORT TO COUNCIL

SUBJECT

Action on a Resolution Authorizing the City Manager to Negotiate and Execute Master Service Agreements with RWG USA, Inc. and Standard Aero to Perform Gas Turbine Engine Parts Supply, Field Services, and Depot Services

COUNCIL PILLAR

Deliver and Enhance High Quality Efficient Services and Infrastructure

BACKGROUND

The City of Santa Clara’s Electric Utility, Silicon Valley Power (SVP) operates three gas fired power generation facilities within the City limits. The Donald Von Raesfeld Power Plant (DVR), the main facility, is a 2x1 combined cycle power plant rated at 147 Megawatts of electrical power generation. The Gianera Generating Station, the City’s peaking generation facility, is rated at 49.5 Megawatts of electrical power generation. The Cogeneration Plant (Cogen), rated at 7 Megawatts, operates two Allison 501-KB5 Gas turbine engines for power generation.

Gas turbine engines are critical to SVP’s continued energy generation operations. As peak power needs in the City continue to grow, these engines become more important to maintain grid stability and reliability and are important to be available to support load growth in the City.

Siemens is the Original Equipment Manufacturer who owns the Allison brand of turbine engines. Only Siemens-authorized service providers may perform field or depot services. RWG and Standard Aero are the only service providers on the North American continent that are authorized by Siemens to perform both field services and depot services on the Allison turbines. There are two additional contractors in the world that are authorized by Siemens to perform the field and depot services; Hindustan Aeronautics LTD (located in India), and Centrax Limited Gas Turbine Division (located in

England). However, it is not practical to contract with either Hindustan Aeronautics or Centrax Limited as SVP would have to either pay exorbitant travel and lodging fees in order to get the contractors' service teams to the City, or pay very high shipping and customs fees in order to ship one of the engines overseas to their location. Shipping an engine overseas would also greatly increase the amount of time the engine is out of service.

Major engine overhauls for the Allison engines are recommended approximately every 40,000 - 60,000 operating hours, which is between six and eight years of operation. The turbine hot section overhaul interval for the Allison engines is recommended approximately every 20,000 - 30,000 operating hours or between three and four years of operation based on Cogen's current operating profile. Engine condition will affect the actual time between overhauls.

These engines require periodic inspections, repairs, and replacement of parts to maintain optimum availability and reliability. In May 2019, Council approved purchase orders with RWG USA, Inc. (RWG) to perform major overhaul services on two of the Allison 501-KB5 turbine engines at the Cogeneration Plant, as the result of a competitive RFP process. Engines ASP-758 and ASP-759 had their turbine hot sections overhauled in 2020 and 2021, respectively. Each overhaul has a cost of approximately \$1,000,000. Cogen's spare engine, ASP-1076, currently requires compressor and turbine work which constitutes a Major Overhaul. The compressor portions for these engines are due for service within the next five years.

On September 23, 2021, SVP staff identified a vibration on one of the Cogen engines which necessitated a shutdown of that engine unit. Upon further inspection, contractors and staff identified damage to the turbine section of the engine which requires immediate corrective maintenance that can only be performed in a shop or depot. The spare engine is due for a major overhaul and is not available to be installed. On September 28, 2021; the City Manager authorized emergency procurement of services pursuant to Municipal Code sections 2.105.300 and Public Contract Section 1102 to bring this engine back into service. The emergency work will mitigate the loss of essential public services. Repairs will be performed by RWG (one of the two authorized North American Service Providers for Siemens engines). In 2019, RWG was the lowest bidder in a Request for Proposal (RFP) to perform these services. The expected cost is \$750,000. On staff's recommendation, the City Manager authorized expenditures of up to \$1.2 million because the engine will be disassembled, and commonly additional repairs are identified through this process. A recent major overhaul had a total cost of \$1.2 million. Staff will authorize work based on specific quotes.

DISCUSSION

To assure that contracts are already in place for emergencies as well as ongoing maintenance and repairs, staff recommends that the City Manager is authorized to negotiate and execute master service agreements with RWG and Standard Aero Limited (Standard Aero) to perform as-needed parts supply, field services, and depot services on the Allison turbine engines.

Field services are defined as inspection, maintenance, and repair services that are performed at Cogen (in the field), including but not limited to:

- Borescope inspections: Borescope inspections are performed every six months or as needed such as when the engine operations indicate a fault.
- Package Inspections: Package inspections include air filter inspections; foreign object debris (FOD) inspections; accessory inspections. Package inspections are typically performed every

six months.

- Engine swaps, such as swapping the spare engine for an engine needing major service or repair.
- Other field repairs and modifications to the engines to be performed in accordance with Allison 501-KB5 maintenance manual, inspection findings, and recommended service bulletins.

Depot Services are defined as inspection, maintenance, repair, and overhaul services that are performed at the contractor's location (depot), including but not limited to:

- Major Engine Overhaul: Major engine overhauls are typically performed after every 40,000 - 60,000 hours of service. The engine is shipped to the contractor's location where it is completely disassembled to inspect individual parts. The contractor performs any necessary repairs and refurbishment on all components according to the original equipment manufacturer's (OEM) specifications. This work includes additional compressor inspections and repairs as needed.
- Inspection of the engine Hot Section (combustor and turbine): This inspection is typically performed after 20,000 - 30,000 hours of service after a major overhaul. During a Hot Section inspection, the contractor will fully inspect the engine, perform necessary repairs and refurbishment on combustor and turbine components according to OEM specifications.
- Any other in-depth troubleshooting that may require the engine to be disassembled at the contractor's location.

Executing the master service agreements with RWG and Standard Aero will allow SVP to select a service provider based on pricing and scheduling availability. Service categories are described in the Allison operating and maintenance manuals. When services are required, staff can request pricing based on the respective service package(s) and compare the pricing between RWG and Standard Aero.

Scheduling is also a critical factor in determining which service provider to use. There may be situations, such as outages, when SVP will need to select the service provider that can start work sooner even if that results in paying a higher cost for the work, because the costs of an outage can be more significant than provider cost differences. Scheduling services to start sooner can reduce the duration of an outage, which in turn reduces the risks of an extended outage. This can also ensure equipment availability for periods of high demand.

The initial term of each agreement is proposed to be five years, with five additional one-year options to extend at the discretion of the City. Compensation shall be paid on a per-project basis and shall not exceed an aggregate maximum amount of \$10,000,000 during the initial term. Staff from SVP and the City Attorney's Office will coordinate in negotiating additional specific terms and conditions with each contractor.

The required major overhaul for Cogen's spare engine, ASP-1076 will be awarded to RWG using of the results of the 2019 RFP in order to maximize the value and time investment in the RFP process. This will also assure that engine ASP-1076 is available as soon as possible to avoid potential future extended outages. The estimated pricing for the major overhaul of engine ASP-1076 overhaul is in line with the costs of the two previous overhauls and is anticipated to cost approximately \$1.2 million dollars. The difference includes a contingency based on past experience. When an engine is sent to

a depot for overhaul, the engine is dismantled, and it is common for unanticipated repairs to be uncovered.

The contracts will be subject to applicable prevailing wage law.

ENVIRONMENTAL REVIEW

The action being considered does not constitute a “project” within the meaning of the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines section 15378 (b)(4) in that it is a fiscal activity that does not involve commitment to a specific project which may result in potential significant impact on the environment. The services to be performed would be exempt from review under CEQA Guidelines section 15301, operation, maintenance, and repair of existing facilities and mechanical equipment.

FISCAL IMPACT

The total proposed authorization in the Master Agreements is \$10,000,000. The costs associated with these proposed agreements are primarily budgeted as part of SVP’s capital budget. Unanticipated services are typically budgeted in the department’s operating budget. Funds for the cost of the turbine engine major overhaul services, including contingency are available in Electric Department Capital Improvement Project 2127 (Major Engine Overhaul and Repair).

Funds required for these agreements in future years will be included in proposed budgets for corresponding years.

COORDINATION

This report has been coordinated with the Finance Department and the City Attorney’s Office.

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City’s official-notice bulletin board outside City Hall Council Chambers. A complete agenda packet is available on the City’s website and in the City Clerk’s Office at least 72 hours prior to a Regular Meeting and 24 hours prior to a Special Meeting. A hard copy of any agenda report may be requested by contacting the City Clerk’s Office at (408) 615-2220, email clerk@santaclaraca.gov <<mailto:clerk@santaclaraca.gov>> or at the public information desk at any City of Santa Clara public library.

RECOMMENDATION

1. Adopt a Resolution authorizing the City Manager to negotiate and execute Master Service Agreements with RWG USA, Inc. and Standard Aero Limited to perform Gas Turbine Engine Parts Supply, Field Services, and Depot Services subject to the following conditions:
 - A. Each agreement shall have an initial term of five years and shall have a maximum amount not-to-exceed set by the City Manager subject to an aggregate maximum authority of \$10,000,000 during the initial term with annual spending subject to the annual appropriation of funds;
 - B. The City Manager shall be authorized to add or delete services consistent with the scope of the agreements and allow future rate adjustments subject to justification by contractor and the appropriation of funds; and
 - C. The City Manager shall be authorized to execute up to five one-year options to extend the term of the master service agreements, subject to the annual appropriation of funds.

Reviewed by: Manuel Pineda, Chief Electric Utility Officer

Approved by: Deanna J. Santana, City Manager

ATTACHMENTS

1. Resolution