



Agenda Report

21-228

Agenda Date: 4/6/2021

REPORT TO COUNCIL

SUBJECT

Action on a Resolution authorizing the City Manager to Negotiate and Execute Master Service Agreements with General Electric Packaged Power LLC and TransCanada Turbines to Perform Gas Turbine Engine Field and Depot Services subject to the following conditions:

1. 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 \$30,000,000 during the initial term with annual spending subject to the annual appropriation of funds;
2. 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
3. Authorize the City Manager to execute up to five one-year options to extend the term of the master service agreements, subject to the annual appropriation of funds

COUNCIL PILLAR

Deliver and Enhance High Quality Efficient Services and Infrastructure

BACKGROUND

Silicon Valley Power (SVP), the City's Electric Utility Department, 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. It is powered by two 50-Megawatt General Electric (GE) LM6000PC gas turbine engines. SVP also has a third LM6000PC turbine engine in storage that can be swapped out and placed into service when one of the two primary engines goes down or is taken offline.

The three engines have been in operation for over 16 years; the two main engines began operating in 2004, and the third engine came online in 2005. Each engine requires routine inspection, maintenance, and repair services in order to keep them operating at an optimal level. Additionally, each engine requires a major overhaul after 40,000 - 50,000 hours of service (about four to five years). The services may only be performed by GE or an authorized GE service provider.

The GE 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.

DISCUSSION

Staff seeks the Council's authorization to negotiate and execute master service agreements with GE Packaged Power LLC and TransCanada Turbines (TCT) to perform field and depot services on the turbine engines. Field services are defined as inspection, maintenance, and repair services that are performed at DVR (field), including but not limited to:

- Borescope inspections, to be performed every six months or as needed such as when the engine operations indicate a fault.
- Package Inspections and Calibrations: air filter inspections; foreign object debris (FOD) inspections; accessory inspections; and checks and calibrations on all instrumentation that drive the sequencing and operation of the engine. Package inspections are typically performed every six months and package calibrations are typically performed annually.
- Swapping engines 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 GE work packages, 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: To be performed after every 40,000 - 50,000 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.
- Inspection of the engine Hot Section (combustor and turbine): Typically performed after 20,000 - 25,000 hours of service (every two to three years) after a major overhaul. During a Hot Section, the contractor will fully inspect the engine, perform necessary repairs and refurbishment on combustor and turbine components according to manufacturer specifications.
- Any other in-depth troubleshooting that may require the engine to be disassembled as the contractor's location.

GE, the original equipment manufacturer, and TCT are the only two service providers on the North American continent that are authorized to perform both field services and depot services on the turbines. There are two additional contractors in the world that are authorized by GE to perform the field and depot services; MTU Aero Engines AG (located in Germany), and IHI Corporation (located in Japan). However, it is not practical to contract with either MTU Aero Engines AG or IHI Corporation 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.

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

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. However, the costs of an outage can be more significant, and 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 for each agreement will 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 \$30,000,000 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 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 \$30,000,000. 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.

For Fiscal Year 2020 / 2021 sufficient funding is available in SVP's capital budget in 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 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>>.

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to Negotiate and Execute Master Service Agreements with General Electric Packaged Power, LLC and TransCanada Turbines to perform gas turbine engine field and depot services subject to the following conditions:

1. 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 \$30,000,000 during the initial term with annual spending subject to the annual appropriation of funds;
2. 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

3. Authorize the City Manager 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