



City of Arts & Innovation

City Council Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL DATE: NOVEMBER 13, 2018

FROM: PUBLIC WORKS DEPARTMENT WARDS: ALL

SUBJECT: REQUEST FOR PROPOSAL NO. 1803 – PROFESSIONAL CONSULTANT SERVICES AGREEMENT FOR A BIO-METHANE UTILIZATION PROJECT AT THE RIVERSIDE REGIONAL WATER QUALITY CONTROL PLANT TO CAROLLO ENGINEERS, INC., OF IRVINE, CALIFORNIA, IN THE AMOUNT OF \$119,645

ISSUE:

Approve a Professional Consultant Services Agreement for a bio-methane utilization study at the Riverside Regional Water Quality Control Plant with Carollo Engineers, Inc., of Irvine, California, in the amount of \$119,645.

RECOMMENDATIONS:

That the City Council:

1. Approve a Professional Consultant Services Agreement for a bio-methane utilization project at the Riverside Regional Water Quality Control Plant with Carollo Engineers, Inc., of Irvine, California, in the amount of \$119,645; and
2. Authorize the City Manager, or his designee, to execute the Professional Consultant Services Agreement with Carollo Engineers, Inc., including making minor and non-substantive changes.

BACKGROUND:

The City of Riverside Public Works Department, Wastewater Division, is responsible for the collection and treatment of wastewater for over 93,000 customers within City limits. Additionally, the City provides wastewater treatment services for the Edgemont, Jurupa, and Rubidoux Community Services Districts, and the unincorporated community of Highgrove.

This entails the operation of primary, secondary and tertiary treatment processes at the Riverside Regional Water Quality Control Plant (RWQCP) to produce high quality effluent that complies with all State and Federal requirements. Currently, the RWQCP just completed a multi-million-dollar plant upgrade and expansion, which includes a Membrane Bioreactor System (MBR) Treatment Train in addition to the traditional primary, secondary and tertiary treatment using sand/gravel filter media treatment process. This will allow the City to treat anywhere from 46 million gallons per day to the ultimate build out amount of 52 million gallons per day of wastewater.

DISCUSSION:

The RWQCP generates bio-methane gas in multiple digesters during the anaerobic digestion process. One of the City's overall objectives is to recover renewable energy sources in a manner that is economically beneficial, energy efficient, and environmentally responsible. The digester complex consists of four primary anaerobic digesters, two solids blending tanks, a FOG receiving facility, and an existing unutilized digester structure. Bio-methane is currently being used for heating of the digester complex. The system uses two boilers that are dual-fed and can be operated on either bio-methane or natural gas. In addition, the RWQCP has a 1.4 mega-watt (MW) fuel cell onsite, which generates approximately one-third of the power needed at the treatment plant. The RWQCP purchases the power under a Power Purchase Agreement with FuelCell Energy, Inc. (FuelCell).

The RWQCP generates approximately 500 standard cubic feet per minute ("SCFM") of bio-methane from the anaerobic digestion of the sewage sludge with the addition of FOG, which went online in July 2017. RWQCP's PPA agreement with FuelCell Energy specifies RWQCP will provide 315 SCFM of raw bio-methane for use by the fuel cell. The fuel cell has been online consistently for over a year with approximately 290 SCFM demand. With the current excess digester capacity and the addition of additional waste streams, it is thought that future bio-methane production of 1000-1600 SCFM can be achieved.

The RWQCP once operated and maintained a Co-generation Facility; however, the facility was decommissioned due to regulation changes from South Coast Air Quality Management District.

On April 28, 2018, Request for Proposal (RFP) No. 1803 seeking a qualified entity or individual ("Company") to study alternative options to increase and maximize the beneficial use of bio-methane as an energy source for long-term planning projections. Also, engineering and technical analyses including, but not be limited to, a detailed investigation study of biogas uses and potential production increases, preliminary design/alternatives analysis, and feasibility analysis to utilize current excess and potential future increase of biogas from the RWQCP in a beneficial manner.

In response to RFP No. 1803, Carollo Engineers, Inc. was selected as the best-qualified candidate based on their understanding of the complexities of the project, past project experience, project approach, and cost of services. Carollo Engineers, Inc. shall provide the services described in the Scope of Services for a total amount of \$119,645 to be completed within 90 days from the issuance of the notice to proceed.

The Purchasing Services Manager concurs that the recommended action complies with Purchasing Resolution 23256.

FISCAL IMPACT:

The fiscal impact of this action is \$119,645. Funds are available in the Public Works-Sewer-Capital Engineering Services Professional Services account 4125900-421000.

Prepared by: Kris Martinez, Public Works Director
Certified as to
availability of funds: Edward Enriquez, Interim Chief Financial Officer/Treasurer
Approved by: Rafael Guzman, Assistant City Manager
Approved as to form: Gary G. Geuss, City Attorney

Attachment: Professional Consultant Services Agreement