



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

17

DATE: January 14, 2022

Reviewed by: GA Date: 1-14-22
General Manager

TO: General Manager

FROM: Director of Engineering & Compliance, District Engineer

SUBJECT: MRWMD-M1W Advanced Water Purification Facility (AWPF) Medium Voltage Project Bid Results – 1) Approve a Revised Project Budget of \$3,890,000; 2) Approve an Additional \$700,000 for Project Funding in Current FY2021-22; and 3) Award a Construction Contract to Anderson Pacific Engineering and Construction, Inc. of Santa Clara, CA in the Amount of \$2,876,400.

RECOMMENDATION: That the Board of Directors, having received a report of the MRWMD-M1W Advanced Water Purification Facility (AWPF) Medium Voltage Project Bid Results, – 1) Approve a Revised Project Budget of \$3,890,000; 2) Approve an Additional \$700,000 for Project Funding in Current FY2021-22; and 3) Award a Construction Contract to Anderson Pacific Engineering and Construction, Inc. of Santa Clara, CA in the Amount of \$2,876,400.

BACKGROUND

In 2016 the District entered into a memorandum of understanding agreement with Monterey One Water (M1W) to supply 1800 kilowatts (KW) of electricity from the District's renewable energy generation plant (aka Landfill Gas-To-Energy (LFGTE) Plant) to the Advanced Water Purification Facility (AWPF) being planned by M1W. The project plan was for M1W to take the lead role of project delivery and design, permit, and build the infrastructure necessary to connect to a dedicated meter at the District's LFGTE Plant, and for the District to provide a supporting role during project delivery. The design was finalized in 2018 and then subsequently bid to solicit construction proposals in both 2019 and 2020. The October 2019 Engineer's Estimate (Kennedy Jenks Consultants) of construction costs for the project was \$1.3 million. The March 2020 bids ranged from \$2.3 million to \$2.44 million. The AWPF Phase 1 project finished construction in 2019 and began full scale deep well injection operations early in 2020 utilizing utility power from PG&E. Due to a variety of reasons, very little response to both bid solicitations was received by M1W and the bids received were over the project cost estimates and approved budget. M1W subsequently put the project on hold at that time.

In the Fall of 2020, the District and M1W decided to switch roles on the project whereby the District would take the lead role and M1W would take a support role on delivering the project for both agencies. The District then authorized Kennedy Jenks Consultants to assess the potential for value engineering design modifications and specification improvements. Their findings were presented in a Technical Memorandum dated March 11, 2021 and indicated the potential for cost savings through value engineering design modifications of the electrical transmission alignment and removal of several 'sole source' requirements for several switchgear, protective relay,

and control equipment. The Board then approved a Kennedy Jenks Consultant’s scope of work in March 2021 to amend the project design plans and specifications accordingly. In October 2021 the Board authorized the call for construction bids. The call for bids occurred in November 2021 and three construction bids were subsequently received on December 7, 2021 at a public bid opening meeting at the District’s Administrative office

DISCUSSION

The three construction bids received by the District on December 7, 2021 are as follows:

Anderson Pacific Eng. Const., Inc.	Santa Clara, CA	\$ 2,876,400
PB Electric, Inc.	Rancho Cordova, CA	\$ 3,179,874
Blocka Construction, Inc.	Pleasanton, CA	\$ 4,235,000

The construction bids are both significantly greater than the Engineer’s Cost Estimate of \$2,001,000 and the District’s approved budget for the project. The bid results are conveying the continued price escalation in the construction industry associated with supply chain challenges, inflationary pressures, labor shortages, and wage increases all in the backdrop of conducting business in the COVID-19 pandemic. The table below presents a revised estimate of costs associated with construction of the project utilizing the lowest qualified bid received from Anderson Pacific. The project is now estimated to cost almost \$4 million, about \$1.5 million more than previously anticipated.

Item	Budget Cost
Construction Bid Cost (Based on Alignment A)	\$2,876,400
Potential Additional Bid Cost for Alignment B	\$140,000
Recommended Construction Contingency Budget (~10%)	\$302,000
Construction Subtotal	\$3,318,400
Engineering Services During Construction	\$189,243
Construction Management	\$329,058
Recommended Construction Management Contingency (~10%)	\$52,000
Construction Management Subtotal	\$570,300
Total Recommended Budget	\$3,888,700

- Given the lack of any substantial remaining cost saving alternatives, the options for the project are either i) to proceed by revising the approved capital budget and project funding or ii) not proceed and close the project.

MRWMD-M1W AWPB Medium Voltage Bid Results

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For the project to proceed, the Board of Directors will need to approve a revised funding approval for the project and incorporate the project's planned capital expenditures in a revised FY21-22 budget and both the FY22-23 and FY 23-24 budget plans. It is estimated that the following adjustments would be necessary to proceed with the project:

- FY21-22 budget would need to increase by \$700,000 to \$1,200,000
- FY22-23 budget would need to increase by \$150,000 (in addition to the \$2 million forecasted)
- FY23-24 budget would need to be \$750,000 (not previously forecasted), and
- The Board approves the lowest qualified bid submitted by Anderson Pacific on December 7, 2021

It is estimated that the Return on Investment (ROI) associated with an assumed capital expenditure of \$4 million for the project would be less than 6 years. In addition, it is also estimated that M1W would receive a reduction in electrical costs at a faster rate than that attributed to the financial benefits of the ROI earned by the District. Both of these elements are positive benefits to each agency, respectively.

FINANCIAL IMPACT

With a revised project budget of \$3,890,000 required to be able to award the low qualified construction bid and to complete the project, additional funds will be required for the project in the current FY20/21, FY21/22, and FY23/24. The additional project funds in the current FY20/21 are available thru cost savings, expenditure deferrals, and additional revenues collected by the District. The additional project funds in subsequent fiscal years will be accomplished thru the normal budget process and by management of expenditures in those fiscal years. The project will accomplish a commensurate sale price for electricity and thus, finally value the District's 38 year investment in renewable energy as part of its mission to Turn Waste into a Resource. The project's ROI of less than 6 years is a favorable characteristic that is better than the typical 7-year criteria used in business and worthy of support for approval of the revised project budget.

STRATEGIC PLAN

The MRWMD-M1W AWPB Medium Voltage project aligns with several of the District's "Pillars of Sustainability". Principally under the Community, Innovation, and Environment pillars. The project is unique and innovative in several ways; not only does it represent a collaboration of two public entities, it accrues financial benefits to both agencies and creates a more sustainable operations framework that will yield cost savings to the customers of both agencies and the communities served.

MRWMD-M1W AWPf Medium Voltage Bid Results

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The use of landfill gas that is created from the municipal solid waste collected from the communities and then used to produce renewable energy at a lower cost which in turn is then used for advanced treatment of water to produce a drinking water supply for the Monterey Peninsula is transformative. It is illustrative of supporting a circular economy and a more sustainable business practice; public works working in the public's interests.

RECOMMENDATION

Staff provided a project update to the Finance Committee at their regularly scheduled meeting of January 12, 2022. The project update included details on i) the three construction bids received at the December 7, 2021 public bid opening and ii) the implications of the higher bid results on the current capital budget and funding for the MRWMD-M1W AWPf Medium Voltage project. The Finance Committee directed staff to bring the revised project budget forward for the Board's review and consideration for approval.

Therefore, staff requests that the Board of Directors, having received a report of the MRWMD-M1W Advanced Water Purification Facility (AWPF) Medium Voltage Project Bid Results, consider making a recommendation to 1) Approve a Revised Project Budget of \$3,890,000; 2) Approve an Additional \$700,000 for Project Funding in Current FY2021-22; and 3) Award a Construction Contract to Anderson Pacific Engineering and Construction, Inc. of Santa Clara, CA in the Amount of \$2,876,400.

Guy R. Petraborg, P.E., G.E.

Attachments:

Kennedy Jenks Presentation Slides

MRWMD to AWP Medium Voltage Project

Board Meeting Presentation

21 January 2022

Project Background

- The District has an agreement with M1W to provide energy to the AWPf from the District's co-generation system.
- The AWPf currently uses ~1.2 MW of power.
- AWPf will be expanding in 2024. Power demands up to ~2MW.
- Similar MV project was bid in March 2020. Bid Cost of ~\$2.44M



2021 Project Alignment could utilize “unused PG&E route” (Alt. A)

M1W AWPf



Bid Alternative B

Bid Alternative A

District Co-Gen Facility

2021 Project Bid Process Overview

- The project was advertised on 26 October 2021.
- A Pre-Bid Meeting was held on 17 Nov 2021 – four general contractors and several specialty electrical contractors attended the pre-bid meeting.
- Three (3) Bids were received on 7 Dec 2021.
- Bids ranged from ~\$2.88M; ~\$3.18M; ~\$4.24M

Overall Project Costs Based on 2021 Bid Process

Item	Budget Cost
Construction Bid Cost (Based on Alignment A)	\$2,876,400
Potential Additional Bid Cost for Alignment B	\$140,000
Recommended Construction Contingency Budget (~10%)	\$302,000
Construction Subtotal	\$3,318,400
Engineering Services During Construction	\$189,243
Construction Management	\$329,058
Recommended Construction Management Contingency (~10%)	\$52,000
Construction Management Subtotal	\$570,300
Total Recommended Budget	\$3,888,700

Potential MV Project Payback Period

- AWPFF initial power usage of 1.2 MW and increasing to ~2 MW in Q2 2024.
- Estimated Net Revenue of \$0.05 per kW (Sales – Cost)
- ~1.5 years payback for \$1M in project cost
- Less than 6 years payback period for \$3.89M project

Potential MV Project Schedule

- Jan 2022 – Board approval of project and budget.
- Jan or Feb 2022 – Notice of Award to Low Bidder.
- Feb or March 2022 – Notice to Proceed to Contractor.
- March 2022 to March 2023 – Procure Switchgear.
- August 2023 – Contract substantial completion.

Potential MV Project Discussion

- Discussions and Questions

Finance Committee Recommendations

- Recommend approval of the revised overall project funding budget of \$3,890,000.
- Recommend approval of amended FY 21-22 project budget increase of \$700,000. (Revised FY budget of \$1,200,000)
- Recommend award of construction contract in the amount of \$2,876,400 to Anderson Pacific Engineering and Construction.