



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by Wmm Date 6/13/08
General Manager

DATE: June 12, 2008
TO: General Manager
FROM: Information Systems Manager
SUBJECT: Professional Engineering Services Contract with Energy-Tech Consultants

RECOMMENDATION: That the Board authorize a Contract with Energy-Tech Consultants to perform Electrical Engineering Work for the installation of a Jenbacher 420 Landfill Gas to Energy engine/generator for an amount not to exceed \$25,360.

BACKGROUND

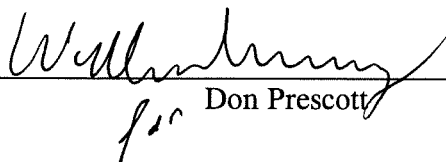
At their December 2007 meeting, the Board authorized the replacement of the Unit 4 Jenbacher 320 engine/generator with a new 1.6 megawatt Jenbacher model 420 at a total project cost of \$1,150,000. The approved project budget is attached.

To assist with electrical engineering services on this project, staff recommends contracting with Rick Kuchenig, P.E., President of Energy-Tech Consultants. Mr. Kuchenig has worked for the District on past landfill gas to energy projects and he is very familiar with the District's power plant. On this project he will continue the work he recently performed for the District during the installation of the 1.6 megawatt Caterpillar 3520 installed in 2007.

Attached is Mr. Kuchenig's Proposal for an amount not to exceed \$25,360 and a summary of hours and costs.

In the project budget, Mr. Kuchenig's work is a component of: Section 2a – PG&E Interconnection (\$50,000); Section 3b – Switchgear Modifications (\$80,000); and all of Section 4c – Electrical Design (\$15,000).

Mr. Kuchenig will proceed with his work immediately upon authorization to prepare for the anticipated engine/generator installation work this fall.


for Don Prescott

Attachments

ENERGY-TECH CONSULTANTS

1166 Oakmont Place
Nipomo, CA 93444

(760) 532-3573

June 10, 2008

Mr. Don Prescott
Information Systems Manager
MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT
Post Office Box 1670
Marina, California 93933-1670

Reference: Landfill Gas Generator #4 Replacement

Proposal #PJ0802B

Dear Mr. Prescott:

Thank you for the opportunity to offer you engineering services for the above referenced project.

The following work will provide you electrical engineering and design support for the replacement of the existing Generator #4 at your facility with a new larger unit. In accordance with our discussions we will perform engineering and design consisting of the following deliverables:

ELECTRICAL

- Review, modify, submit the utility Generator Interconnection Application Form and provide timely updates and submittals to the utility when information becomes available.
- Modified Electrical One-Line diagram and other necessary utility interface drawings which are not otherwise provided by product suppliers showing the anticipated electrical system changes to your system so as to satisfy the utility Interconnection Application Form
- Visit site to Kickoff project and survey project requirements
- Perform utility interface and protective relaying settings for coordination of the new generator with the electric utility to gain utility approval for interconnect.
- Prepare electrical construction drawings for changes needed to accommodate the new larger machine.
- Provide coordination with switchgear controls designer (Enercon) and assure completeness of interface controls for new generator unit.
- Provide construction monitoring support (up to 3 man days are included with this proposal).
- Supply as-built electrical construction drawings.

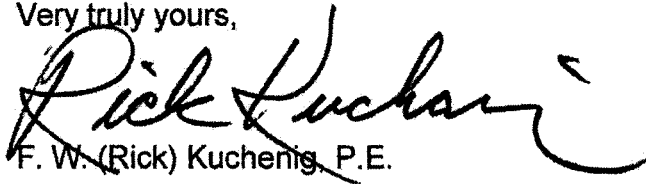
Attached is a schedule of man-hours not expected to be exceeded to complete the electrical engineering tasks and is summarized as follows:

Electrical Engineering:	\$25,360.00
Total Not-to-Exceed:	\$25,360.00

We trust this proposal meet your expectations, but if you have any questions or concerns, please call. If you find this proposal satisfactory please sign and return an original for our records.

Again thank you for the opportunity to offer you these services. We look forward to performing this interesting project for you.

Very truly yours,

A handwritten signature in black ink that reads "Rick Kuchanig". The signature is fluid and cursive, with a large initial "R" and "K".

F. W. (Rick) Kuchanig, P.E.

President
Energy-Tech Consultants

Agreed amount of electrical engineering services: Preliminary and Detailed Design, Not to Exceed: Twenty-five thousand three hundred sixty dollars. (\$25,360.00)

Accepted by:

Date

Monterey Regional Waste Management District

Attachments: *Summary Electrical Man-hour Rates and Estimate Work Scope*

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

**Cost Estimate for Installation of New Engine/Generator (Replacement for Jenbacher Engine/Generator Unit)
Cost Estimate Based on Installation of Third Jenbacher (2002)**

INSTALLATION OF NEW ENGINE/GENERATOR (1.4 MW)	MRWMD ESTIMATE	ACTUAL COSTS			
		Outside Vendors	Materials	Labor	Total
1. Jenbacher 420 Engine/Generator; Delivered/Commissioned	\$737,000				
Tax (7.25%)	53,000				
No. 1 Subtotal	790,000				
2. PG&E					
a) PG&E Interconnection / Facility Studies	50,000				
No. 2 Subtotal	50,000				
3. Installation					
a) Radiator Pad Retrofit	20,000				
b) Switchgear Modifications/Enercon	80,000				
c) Electrical Wiring	15,000				
d) Mechanical - Including new exhaust system	35,000				
e) District Materials - Engine specific parts	15,000				
f) Testing by Power Systems	15,000				
g) Crane Services & Miscellaneous	10,000				
No. 3 Subtotal	190,000				
4. Design & Testing					
a) AQMD Permit Application	10,000				
b) Seismic/Structural	5,000				
c) Electrical Design	15,000				
d) Mechanical Design	10,000				
e) High Voltage Electrical	20,000				
f) Project Management	20,000				
No. 4 Subtotal	80,000				
Subtotal (No. 3 - 4)	270,000				
6. Contingency (\$270,000 x 15%)	40,000				
TOTAL (NO. 3 - 6)	\$310,000				
GRAND TOTAL	\$1,150,000				