

REQUEST FOR QUOTE
FOR
OWNER'S ENGINEERING SERVICES
FOR
UNIT 4 ADDITION TO THE JEFF L. TAYLOR
PINE FLAT POWER PLANT



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LIST OF ABBREVIATIONS

KRCD	Kings River Conservation District
KRWA	Kings River Water Association
FERC	Federal Energy Regulatory Commission
USACE	United States Army Corp of Engineers
RFQ	Request for Quote
RFP	Request for Proposal
OE	Owner's Engineer
EPC	Engineering, Procurement and Construction
CAISO	California Independent System Operator
WREGIS	Western Renewable Energy Generation Information System
REC	Renewable Energy Certificates

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1. OBJECTIVE

Kings River Conservation District (KRCD or the Owner) is requesting quotes from interested engineering firms (Proposers) specializing in engineering and related services including but not limited to project management, construction management, services during construction, planning, design review, modeling and inspection services for addition of a small hydroelectric unit to the existing Pine Flat Hydroelectric Plant. The selected engineering firm shall act on behalf of KRCD as "Owner's Engineer" and oversee various engineering for design, manufacturing, quality assurance and site construction of a complete small hydroelectric unit.

The Proposers are invited to submit quote in the form of a proposal document, describing their qualifications and experience to perform technical and engineering services for the scope defined in section – "Scope of Services". KRCD will enter a contract with the qualified and selected Proposer (Owner's Engineer) to render the services described herein on an as-needed basis. The Proposers shall demonstrate extensive experience in managing the types of projects previously mentioned within the last five years and provide documentation demonstrating that the projects provided as reference were completed in a timely manner and within budget. The proposer is expected to have extensive experience in carrying out engineering and project management functions in the sector of small hydro systems and component engineering design, installation and construction. The selection of the Owner's Engineer will be in sole discretion of KRCD.

2. BACKGROUND

Established in 1951, by the Kings River Conservation District Act (Assembly Bill No. 340, Chapter 931, the "KRCD Act") and headquartered in Fresno, California, KRCD is a public agency governed by a seven-member Board of Directors, one from each division within KRCD's service area. The KRCD Act provided for KRCD's organization, operation, maintenance and government, for the inclusion of lands therein and the exclusion of lands therefrom; providing for the acquisition, construction, maintenance and operation of works and property for the purposes of the district, including the storage, conservation, distribution and sale of water, the development, distribution and sale of electric power, the drainage, reclamation and protection of land and prescribing and defining the powers, duties and responsibilities of said district. KRCD's mission is to provide flood protection, cooperate with other agencies to achieve a balanced and high-quality water supply, provide on-farm support in efficient water conservation practices, and develop power resources for the public good.

The Pine Flat Dam is owned and operated by the US Army Corps of Engineers (USACE). The dam became operational in 1954 and is a concrete gravity dam 440 feet high and 1,840 feet in length. Pine Flat dam impounds Pine Flat Lake with a capacity of 1,000,000 acre-feet with 100,000 acre-feet of inactive capacity. Pine Flat lake has a maximum surface area of 5,970 acres and maximum water depth of 429 feet. Although

the primary purpose of the dam is flood control, Pine Flat Dam provides irrigation water with water and storage rights that are owned by both public and private irrigators and managed by Kings River Water Association (KRWA). Run-of-river hydroelectric power generation and recreation are additional benefits. In 1979, KRCD received a 50 year FERC license and in 1984, completed construction of the Jeff L. Taylor Pine Flat Power Plant at the base of Pine Flat dam. The facility consists of three, 55 MW vertical Francis turbine generators for a total installed capacity of 165 MW and operates under a long term contract with the California Department of Water Resources.

In December 2021, KRCD filed with FERC a license amendment to add a 6.3MW small hydro unit (Project) to its existing Jeff L. Taylor Pine Flat hydroelectric powerplant. The Project is being developed as a means of generating energy from environmental water releases below Pine Flat dam that currently utilizes a turbine by-pass system and valves installed upstream of existing generation units.

The turbine bypass system draws water from the three penstocks upstream of the existing turbines and discharges the bypassed flow through steel conduits to the King's River below Pine Flat dam. The purpose of the bypass is to provide enhanced water flow for environmental management of the Kings River below Pine Flat Dam. The bypass system typically operates when the existing turbines are not in operation or discontinuation of power generation occurs when:

- when the discharge is less than 500 to 600 cubic feet per second (CFS),
- when the reservoir elevation is less than 715 feet, or
- when the power plant is having operation problems or undergoing maintenance.

Operational flexibility in the bypass system is provided by allowing flows to be bypassed from any (or all) of the three penstocks that supply water to the three generating units in the power plant. Each bypass line can be isolated using shutoff valves. Water supply to one or two of the 55 MW powerhouse turbines can be made, with bypass releases occurring on the remaining penstock. The bypass system consists of a 66-inch bypass and Monovar¹ release valve upstream of Units 1 and 2. And a second bypass 48-inch bypass system with a separate Monovar release valve upstream of Unit 3. Concurrent turbine and bypass releases are not permitted. Monovar valves are energy dissipating type valves and were chosen to minimize scour in the downstream channel.

The project, as currently proposed, consists of a single 6.3MW rated horizontal Francis turbine generator connected into the existing 230 kilovolt (kV) switchyard. No additional new transmission facilities will be required for interconnection of the proposed project. The new powerhouse would take water from the existing Unit 1 and 2 turbine bypass piping to produce energy and supply minimum flow releases below Pine Flat dam. Both the turbine bypass systems would remain in place as a means to bypass the flow from the penstocks.

¹ A Monovar valve consists of a fixed and sliding plate with a pattern of orifices in each plate. As the sliding plate is adjusted the orifices line up controlling flow through the valve. When the valve is fully open the orifices in the fixed and sliding plate are fully aligned to allow full flow through the valve.

All major equipment is planned to be in a new powerhouse, adjacent to the existing switchyard, specifically for Unit-4 while suitable cabling mechanism will allow remote monitoring and control of the unit from the existing main control room, located one level below.

3. PROJECT DEVELOPMENT

KRCD has considered issuing two additional RFPs – one for the EPC contract of the overall project and secondly for direct procurement of major generating and power equipment for Unit-4, that are usually termed as water to wire package by hydro equipment manufacturers and suppliers. The EPC contractor and the equipment supplier will be responsible for the overall design of the project and equipment required for the complete small hydro project. Once KRCD procures the water to wire equipment package, the ownership would be transferred to the EPC contractor along with the warranties associated with such equipment.

Appendix-A shows the supply scope limit from the equipment vendors. KRCD is also evaluating the design and supply of additional equipment that will be excluded by the vendors in the water to wire package. KRCD shall engage selected Owner's Engineer to assist with preparation of technical specification for bids of such equipment. This way, KRCD can buy the required equipment directly from the equipment manufacturers, with the benefit of cost and time saving potential.

EPC contractor will be responsible for all the interconnections between the systems and will be responsible for an overall project design. The Owners Engineer will perform design review and project management support through the entire project duration.

4. SCOPE OF SERVICES

The Owner's Engineer will be representing KRCD during all the stages of this project providing overall engineering functions. The OE shall have suitably qualified personnel to oversee all aspects of a small hydroelectric project including civil, structural, hydraulic, mechanical, electrical, controls and mechanical engineering.

It shall be noted that since the assignment will be "As per need", the selected OE shall submit a "not-to-exceed" cost task orders during several stages of the project as per the scope identified during the active project execution. The task order should be developed by discussing in advance with the KRCD project team and shall list out details of the work to be performed, expectations and deliverables for the specific task order; the task order must be approved by KRCD project manager before commencing the work. KRCD expects a reasonable cost for all the task orders but if for some reason the cost for the task order is deemed unrealistic or far exceeding KRCD's expectations, the particular task order may be excluded from the OE's scope of work.

The OE shall be able perform the general functions listed below-

1. Prepare/ review technical specifications for all the equipment required for Unit-4 small hydro project. KRCD expects to release a separate RFP to potential water to wire turbine vendors. Depending on the scope limit of the selected turbine vendor, OE shall prepare technical specification for the remainder of the equipment including all the cabling, structural, mechanical and electrical components.
2. Assist KRCD with assessment of the EPC and equipment vendor bids. OE might be asked to run a cost and technical feasibility assessment for this purpose.
3. OE shall review all the design documents including but not limited to drawings, calculations, modelling, data sheets, proposed changes/ modifications from the EPC, turbine vendor and other equipment manufacturer. OE shall work closely with the owner, KRCD while reviewing such documents.
4. Represent or assist KRCD, as requested, to witness Factory Acceptance Testing at the manufacturer's facility. Review vendor's test procedures prior to such acceptance testing.
5. As requested, review commissioning procedures and oversee commissioning activities at site.
6. Provide recommendations to design alternatives that's more economically and technically feasible.
7. Provide document control functions during the project duration. Document management (i.e. design/shop drawings, Request for Information (RFI), Request for Clarification (RFC), change order, monthly reports, progress payment, memos, meeting minutes, etc). KRCD may use own resources for the document management functions.
8. Assume lead role for Unit-4 CAISO line interconnect application, from start to finish.
9. Support KRCD with application for Renewable Energy Certificates (REC) with Western Renewable Energy Generation Information System (WREGIS).
10. Other Permitting and regulatory support.
11. Provide constructability review and value engineering of the construction documents.
12. Change order management, evaluation, negotiation, and recommendations.

Following sections list out some of the tasks the OE is expected to execute at various stages of the project. The list is not comprehensive and the task order(s) could change depending on the need.

4.1. Pre-Design Phase

1. Review record drawings of existing power plant as required.
2. Visit and walk the site of the proposed work, if required.
3. Prepare budgetary and detailed project cost estimates.
4. Help prepare preliminary schedules for project.
5. Prepare Request for Proposals (RFP) for power plant equipment- for both water to wire equipment supplier and additional equipment not provided by such vendor/supplier.

6. Respond to Requests for Information (RFI) during RFP.
7. Maintain RFP or plan holders list.
8. Prepare and disseminate addendums to the RFP.
9. Assist KRCD in selection of EPC and water to wire equipment vendor/supplier.

4.2. Design Phase

1. Review project schedule.
2. Participate in kick-off meetings with EPC and equipment vendor(s).
3. Review and respond to RFIs.
4. Manage design progress to ensure project schedule is being met.
5. Review EPC and equipment vendor's design, plans, specifications, calculations, modelling and other submittals for all percentage stages of plan submission. Review stages are yet to be finalized but we expect no more than three(3) review stages for major design and a final as-built.
6. Recommend design alternatives that present opportunity for cost and time savings.
7. Ensure quality standards are met for all design documents throughout the project.
8. Assume the document control functions. KRCD may have own personnel available for this task.

4.3. Pre-Construction Phase

1. Provide Constructability review.
2. Participate in pre-construction meeting with KRCD, EPC and equipment vendors.
3. Establish coordination and communication procedures among all participants.
4. Coordinate the distribution of shop drawings submittals to the required parties.
5. Provide review of submittals and recommend changes/approval.
6. Maintain log of submittal status.
7. Coordinate with KRCD for issuance of Notice to Proceed to EPC.

4.4. Construction Phase

1. Manage, log, and perform review and distribution of shop drawings and submittals with EPC. Certify compliance with Specifications and KRCD standards.

2. Assist KRCD with participation of in-person Factory Acceptance Testing (FAT) at equipment manufacturer's facility as and when requested. Review Quality and test procedure documents prior to the testing. Final FAT witness is planned for major equipment only. Additionally, assist KRCD during several stages of approval during the manufacturing process, depending upon the type of the equipment.
3. Maintain As-Built markup plans. As-Built markup plans will also be used at the end of the project for review of final As-Built plans.
4. Review and recommend approval of requested change orders from EPC and/or equipment vendors.
5. Assist KRCD in resolving conflicts in the plans and/or specifications, EPC suggested design changes, and design changes necessitated by unforeseen field conditions.
6. Establish and implement procedures for processing and expediting Requests for Information (RFI), Requests for Clarification (RFC), shop drawing submittals, material and equipment sample submittals, contract schedule adjustments, change orders, substitutions, and payment requests.
7. Upon request from KRCD, the Owner's Engineer shall be responsible for Inspection Services including, but not be limited to, testing and verification of materials and construction equipment, all facility construction. This will mainly include testing and commissioning of equipment. All of Owner's Engineer inspectors shall have appropriate technical certifications in the designated field of expertise in which inspection services are being performed. A list of certifications shall be submitted as part of the RFQ response.
8. Monitor and verify Project Record Drawings during construction.

4.5. Post-Construction Phase

1. Prepare final punch-list and verify completion of punch list items by EPC for final acceptance by KRCD.
2. Assist in Project closeout and assemble all warranties, guarantees, and operation and maintenance manuals.
3. Verify the accuracy of all Record Drawings, as prepared by the EPC and equipment vendors.
4. Assist KRCD in preparing final Construction report summarizing the Project history; including, major problems, claims and recommendations, corrective actions taken during construction and schedule of values (cost vs. budget analysis).

4.6. CAISO Interconnect Application

The Owner's Engineer will work on all necessary steps of the CAISO application process to add Unit-4 to the grid.

The Owner's Engineer shall help KRCD evaluate the appropriate application process – either Cluster or the Independent Study Process (ISP). KRCD will pay all the necessary fees associated with the CAISO Interconnect application process, so it should be excluded from the OE's cost.

5. GENERAL QUALIFICATIONS INFORMATION

1. All RFQ responses and related submittals will become the property of KRCD.
2. A response may be considered non-responsive if conditional, incomplete, or if it contains alterations of form, additions not called for, or other irregularities that may constitute a material change to the RFQ.
3. RFQ Response/ Proposal Validity – RFQ responses and associated documents must be valid for a period of at least twelve (12) months from the closing date and time of this solicitation. Response package may not be withdrawn after the submission date.
4. KRCD shall not be liable for any pre-contractual expenses incurred by respondents in the preparation of their RFQ response. Respondents shall not include any such expenses as part of their response documents.
6. KRCD reserves the right to:
 - Reject any or all RFQ responses.
 - Select the "Proposal" most advantageous to KRCD.
 - Verify all information submitted in the RFQ response.
 - Withdraw this RFQ at any time without prior notice and furthermore, makes no representations that any contract will be awarded to any firms responding to this RFQ.
 - Negotiate the final Contract with any firm(s) as necessary.
 - Amend this RFQ.
 - Amend the final Contract to incorporate necessary attachments and exhibits or to reflect negotiations between KRCD and the successful firms selected to act as the Owner's Engineer.

6. ANTICIPATED SCHEDULE

This RFQ is subject to the following schedule:

1. Issuance of the RFQ: March 31, 2022
2. Last day for questions: April 15, 2022
3. Deadline for submitting RFQ response: April 20, 2022

4. KRCD review of RFQ responses: April 20-29, 2022
5. Discussion with firms, as deemed necessary: April 20-27, 2022
6. KRCD selection of qualified firm: April 29, 2022
7. Negotiations, by May 4, 2022
8. Contract Award, by May 6, 2022
9. Issue Notice to Proceed May 16, 2022

7. QUESTIONS OR CLARIFICATIONS

All questions regarding this RFQ shall be submitted via email in the form of Request for Information (RFI). Emailed questions and inquiries will be accepted from prospective proposers. All questions shall be submitted no later than Friday, April 15, 2022 by 5:00 P.M (PST). RFI should be addressed as follows: **Pine Flat Unit-4 Owner's Engineer RFI questions** emailed to KRCD Project Manager, Pawan Niroula at pniroula@krcd.org.

8. RFQ RESPONSE INSTRUCTIONS

The response to this RFQ shall be in the form of a proposal document that basically outlines the capability of the consulting firm to carry out the defined project, past similar experiences and rate schedule.

A. PDF Digital format

RFQ response shall be in a digital format as a single pdf file. All responses shall be identified with "RFQ response to Kings River Conservation District- Owner's Engineer for Pine Flat Hydroelectric Project Unit-4" legibly typed on the cover page of the document.

B. Submittal

RFQ response shall be submitted via email to the email address below:

To: Pawan Niroula

Email: pniroula@krcd.org

Subject: RFQ Response- Pine Flat Unit-4 Owner's Engineer

Complete RFQ responses along with supporting documents are due no later than 1:00 pm Pacific Time, April 20, 2022. RFQ response(s) received/ emailed after the deadline will not be considered.

KRCD will not be responsible for submittals that are delinquent, lost, mis-marked, sent to an email address other than the address provided above.

C. Response Requirements

RFQ response document(s) must be prepared simply and economically, providing a straightforward, concise description of methodology and approach to satisfy the requirements of this RFQ. They shall be organized in separate sections tabbed with corresponding letters and related headings in the order presented below:

1) Executive Summary Letter

This letter shall be a brief formal letter from the responding firms that provides information regarding the responder and the company's ability to perform the required tasks of this RFQ. This letter must include the following information: complete legal company name (as it should appear in a contract), address, contact person, telephone number, and e-mail address. This letter shall identify all materials and enclosures being forwarded in response to this RFQ. The letter must be digitally signed with date and time by an individual authorized to bind the respondent- the individual must clearly state his title/ position.

2) Validity of RFQ response and associated documents

Responses to this RFQ shall be valid for a minimum of twelve (12) months.

3) Certificate of Liability Insurance

Responding firms shall submit their relevant Certificate of General liability in the amount of \$5,000,000 and a Professional Liability insurance in the amount of \$5,000,000 to be in place for the duration of the project and for 3 years after the completion of the project. In addition, Workers Compensation insurance for statutory limits required by law including employer's liability coverage in the amount of in the amount of \$1,000,000 combined single limit is required.

Responding firms shall also carry a commercial auto liability insurance with a \$1,000,000 limit. If the firm/ consultant does not own any vehicles, then a coverage for "Hired and non-owned" auto insurance in the amount of \$1,000,000 will be required.

4) Qualifications, Capabilities, and Experience

Responding firms shall provide a brief discussion of their qualifications and capabilities to perform work similar in nature to the services requested herein. The firms shall provide a brief discussion of its previous experience with engagements that are the same or similar in nature to the services requested herein.

5) Key Personnel

Responding firms shall provide the names, resumes, and a statement of qualifications of key personnel who are expected to be assigned to this project and shall identify their specific

responsibilities and qualifications. The list shall identify the intended Principal Managing Consultant or the Project Manager for the project

6) References

Responding firms shall provide a minimum of three (3) references from different clients for engagements performed in the last five (5) years where the services provided were the same or similar in nature to the services requested herein. The Reference Information should include:

- Client's name, contact person, contact person's responsibility and relationship to the project, address and telephone number.
- Reference shall be small hydro (5-10MW) projects that the consulting firm supported as an Owner's Engineer in the last five years.
- Names of key personnel on the team that participated in named Projects and their specific responsibilities
- Completion dates (estimated, if not yet completed)
- Total fees received (or projected)
- Total costs of completed Project

7) Sub Consultants List

Responding firms shall submit a complete list of all sub consultants they intend to utilize in the provision of services requested in this RFQ.

8) Price Proposal

RFQ response shall include an hourly rate schedule.

9) Exceptions and Clarifications

RFQ response shall include exceptions and clarifications, if any.

9. SELECTION PROCESS

KRCD personnel will review the RFQ responses and consider the following factors to select the most qualified consulting firm:

- Completeness of RFQ response
- Quality of RFQ response
- Proposer's Qualifications, Capabilities, and Experience
- Professional Qualifications of Key Personnel
- Rate Schedule
- References and past 5 years' experience with projects of similar size and value

Based on review of the RFQ responses, a short list of qualified firms may be selected for an interview and presentation, if necessary.

Negotiations regarding agreement terms, conditions, scope of services, and pricing may or may not be conducted with the selected consultant. Therefore, the RFQ responses submitted should contain the responder's most favorable terms and conditions, since the selection and award may be made without discussion with any responder. If KRCD engages the responding consultant in negotiations and satisfactory agreement provisions cannot be reached, then negotiations may be terminated. KRCD may elect to contact with another responder who has submitted a response to this RFQ. This sequence may continue until an agreement is reached.

10. GENERAL INFORMATION

1. Each Proposer understands and agrees that KRCD will not be liable for any costs incurred by firm in the preparation, delivery, or presentation of the qualifications and/or response to this RFQ.
2. It is the responsibility of the respondent to carefully examine the requirements expressed in the RFQ and fully educate themselves with the quality and character of services required. All responses to the RFQ will become the property of KRCD and will be retained or disposed of accordingly.
3. KRCD reserves the right to reject any or all RFQ responses and to modify the RFQ and re-solicit.
4. The terms and scope of the resulting Contract will be determined on the basis of professional negotiations between KRCD and the qualified firm. If KRCD and the qualified firm fail to reach an agreement, KRCD may commence negotiations with other qualified firm.

11. REFERENCE DOCUMENTS

KRCD will provide all necessary and relevant documents to the selected consultant upon signing of non-disclosure agreement (NDA). The document set will include Preliminary design drawings of the project, CFD analysis of the penstock and bypass system and other relevant project documents.