CONSULTING ENGINEERING GEOLOGIST SERVICES
STATEMENT OF WORK

1.0 BACKGROUND

1.1 The Federal Energy Regulatory Commission (FERC or Commission) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects.

1.2 The Office of Energy Projects facilitates potential benefits to the nation through the review of natural gas and hydropower infrastructure proposals and minimize risks to the public associated with FERC jurisdictional energy infrastructure. The Office focuses on project siting and development; balancing environmental and other concerns; ensuring compliance; and safeguarding the public.

1.3 The Division of Dam Safety and Inspections carries out all activities related to the Commission's dam safety program. Before projects are constructed, Commission engineers review the designs, plans, and specifications of dams, powerhouses, and other structures. During construction, and throughout the life of a project, engineers inspect projects as appropriate. The Division is also responsible for reviewing independent consultant reports, working with licensees and exemptees on developing and testing emergency action plans, preparing engineering guidelines, and collaborating with other agencies and industry staff.

2.0 OBJECTIVE

The objective of this contract is secure the services of a consulting engineering geologist on a labor hour basis to provide engineering geology expertise to the Office of Energy Projects – Division of Dam Safety and Inspections.

3.0 SCOPE OF SERVICES

Contractor shall provide consulting engineering geology services as it relates to the Commission's dam safety program and jurisdictional hydropower infrastructure. The government anticipates approximately 500 consulting hours. The government, based on historical data and the government's anticipated need for each option period, has estimated 500 hours per period of performance. However, it is possible that the services could be up to 700 hours/year because of the occurrence of dam safety incidents or events.

Typical work efforts associated with the effort include but are not limited to:

- Review of submitted analyses, including digital files, prepared by Licensees or their consultants.

- Review of published data or reports from federal, state and local sources.
- Attendance at Board of Consultants meetings and project meetings.
- Provide expert advice to FERC staff on complex engineering geology issues.
- Review proposed scopes of work developed by Licensees or their consultants for consistency with the FERC guidelines and state-of-the-practice procedures.
- Preparation of written reports as directed, with critiques, conclusions and recommendations.
- Review and comment on correspondence or other communications to Licensees prepared by FERC staff.
- Develop technical whitepapers to assist dam safety staff in reviewing/resolving complex technical topics
- Provide technical topic training to FERC staff

4.0 DESCRIPTION OF REQUIREMENTS

4.1 Contractor shall perform a technical review of and analyze Commission produced engineering geology related documents to include policy, plans, guidance, methodology, letters, and reports. Contractor shall provide comments and recommendations in emails or other written work products as outlined in the Deliverables Section.

4.2 Contractor shall develop engineering geology related white papers that provide guidance, methodologies, and supporting analysis to assist dam safety staff in reviewing/resolving complex technical topics.

4.3 Contractor shall serve as an advisor and engineering geology subject matter expert to provide comments, observations, input, and recommendations relative to potential failure modes and risk estimates. Contractor shall that addresses the key topics and outcomes from the review of written documents or discussed during meetings.

4.4 Contractor shall attend FERC hydropower project meetings and provide comments, observations, input, and recommendations to engineering geology items. Contractor shall prepare written material that addresses the key topics and outcomes discussed during meetings.

4.5 Contractor shall, as determined by the Director, attend Board meetings review of Board of Consultants reports and provide written findings and conclusions in a final Board report.

4.6 The Contractor will coordinate with the Division's Engineering Geology Technical Resource Group (TRG) to identify, develop, and provide training to internal staff on engineering geology topics related to the dam safety program.

4.7 The Contractor shall have the capability to respond to "emergency situations", involving either construction related problems, evaluating the performance of a water retaining feature of a project, or assisting staff in addressing other significant engineering geology features or events, within two weeks of receiving notice from the COR. The duties include: investigation and evaluation of a dam potential failure or performance and proposing remediation measures.

4.8 The Contractor shall be expected to participate in technical conferences with the Licensees or operators and their consultants with respect to seismic design and geotechnical issues. Based upon the studies, conferences, and inspections, the contractor shall submit reports to the FERC staff setting forth the technical evaluation, recommendations, and conclusions for the various work efforts listed above.

4.9 The Contractor shall abide by the FERC conditions with respect to critical energy infrastructure information (CEII) that the company has access to because of its work for the FERC. The CEII statement is included as Attachment tbd

4.10 The Contracting Officer's Representative (COR) shall provide a list of projects requiring flood hydrology services as the projects become available.

4.8.1 Contractor shall prepare an Implementation Plan (IP) and cost estimate for each project assigned to Contractor.

4.8.2 The IP shall include at a minimum:

- A description of the methods for use in planning, managing, controlling and reporting on task elements;
- A description of the technical approach to be followed for each task;
- A description of how tasks shall be scheduled; and
- The deliverables.

4.8.3 The IP shall include a delivery schedule consistent with the time frames noted below or elsewhere in this SOW and shall identify when the actions shall take place or deliverables shall be provided:

Implementation Plan (IP) Elements	Schedule
Review project history, design report, and provide IP	3 weeks
Collaborate on FERC review memo and response letter	2 weeks
Attend site visit and project review meeting	3 days
Prepare review memo documenting inspection and providing comments	2 weeks
Review licensee's response to comments and provide input into FERC response	2 weeks
Review final plans and specifications and provide comments via letter	2 weeks
Attend meetings and prepare review memos	1 week
Review final evaluation report and provide final review memo	2 weeks
Monthly status reports	monthly

4.8.4 The cost estimate shall identify the estimated cost for the project. The cost estimate shall include:

- The number of consulting hours;
- The fully-burdened labor rates; and
- Travel costs, (if applicable).

4.8.5 Upon review and approval of the IP and cost estimate the COR will authorize Contractor to proceed with work related to the specific project. Contractor shall not proceed with work or otherwise incur cost related to a specific project (other than preparation and submission of the IP and cost estimate) until Contractor is authorized in writing by the COR proceed with work.

Note: Section 4 requirements are the typical for projects assigned to Contractor. Some requirements may not apply to individual projects. The final evaluation report shall include Contractor's technical review, recommendations, and conclusions for the project.

5.0 APPLICABLE DOCUMENTS

Project related information such as engineering reports, dam safety inspection reports, and related correspondence may be filed with FERC under a CEII classification in FERC's eLibrary System. Upon submission and approval of the OCI and CEII NDA certifications FERC shall provide Contractor access to the necessary engineering reports and correspondence. The COR may provide additional materials upon request and/or may direct Contractor to obtain materials directly from the subject Licensee.

6.0 KEY PERSONNEL, MANAGEMENT AND ADMINISTRATION

The knowledge, skills, abilities and experience of the consultant engineering geologist is critical to the quality of the services and deliverables provided under this contract, the consultant engineering geologist is designated as key personnel throughout the performance of this contract. As proposed by the contractor and accepted by the government, all technical work related to this contract shall be performed by the identified consultant engineering geologist. Technical work shall not be subcontracted or otherwise re-delegated to other personnel. Non-technical, administrative work (i.e. invoicing and travel arrangements) may be performed by personnel other than the identified engineering consultant.

Key Personnel must possess the following:

- Master's degree in engineering geology or geological engineering.
- At least 25 years academic and experience in engineering geology as it relates to dam safety projects. Knowledge and understanding of:

    - Basic and advanced investigation and exploration methods for site characterization of dams
    - Characterization, evaluation and assessment of foundation conditions of proposed and existing dams

- Evaluation and assessment of ground improvement techniques for dam foundations, including grouting, densification, cutoff walls, and other common ground improvement methods.
- Evaluation and analysis of soil and rock foundations for dams and appurtenant structures, including seepage, stability, settlement, and seismic deformation.
- Evaluation, assessment, and design of dam foundations
- Methods and practices for construction of foundations for new and modifications to existing dams and their appurtenant structures.
- Basic and advanced techniques and evaluation of monitoring of dam foundations
- Knowledge of FERC's Engineering Guidelines for Dam Safety
- Knowledge of FERC's Engineering Guidelines for Dam Safety Those guidelines can be found at: https://www.ferc.gov/industries-data/hydropower/dam-safety-and-inspections/eng-guidelines

The great majority of the work required under this contract is technical work which is performed by the consultant engineering geologist. This contract requires very little non-technical work such as project management (i.e. scheduling and status reports) and administrative support (i.e. travel arrangements). For purposes of this contract, non-technical work may be performed by the consultant engineering geologist or delegated to another individual; however, the project management/administrative work shall not be a direct cost under this contract. All project management/administrative costs shall be included as indirect costs included in the fully burdened labor rate for the consultant engineering geologist.

7.0 DELIVERABLES

A deliverable is defined as any document/report that is required to be generated during the period of performance of the contract is outlined in the SOW. Contractor shall submit deliverables through the COR for review and approval. The COR will respond to the deliverables submitted with formal approval or non-approval. Deliverables shall be submitted via email using software compatible with FERC's systems along with a hard copy. In the event that document exceeds the email capacity of either party, Contractor shall setup a secure file transfer site for transfer of large documents. All deliverables are the property of the FERC and the information contained in the reports is considered proprietary.

Contractor shall promptly notify the FERC Project Manager and COR of any noncompliance resulting in significant impact and if a scheduling change is necessary to complete the assigned task. In no case shall this notification exceed 24 hours.

The Government reserves the right to inspect all deliverables that have been tendered for acceptance. The Government may require correction of non-conforming deliverables at no increase in price. If correction is not possible, the Government may seek an equitable price adjustment or adequate consideration for acceptance of the non-conforming deliverables.

SOW AREA	DELIVERABLE	FREQUENCY	ACCEPTANCE	RECIPIENT
Section 4	Contractor shall furnish all labor, materials, equipment (including cameras), facilities, software, transportation, and incidentals necessary to perform in accordance with this SOW, and associated terms and conditions.	Daily/As Needed	100% free of data and grammar errors. Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract.	COR/PM
Section 4	Communicate with the FERC COR, FERC Project Manager, and company representatives as necessary to ensure all project related tasks are performed in a timely manner.	Weekly/As Needed	100% free of data and grammar errors. Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract.	COR/PM
Section 4	Participate in technical conferences with the Licensees or operators and their consultants with respect to seismic design and geotechnical issues.	As Needed	100% free of data and grammar errors. Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract.	COR/PM
Section 4	Based upon the studies, conferences, and inspections, submit reports to the FERC staff setting forth the technical evaluation, recommendations, and conclusions for the projects.	As Needed	100% free of data and grammar errors. Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract.	COR/PM
Section 4.8	Implementation Plan (IP)	As Needed	100% free of data and grammar errors. Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract.	COR/PM
Section 5	Abide by the FERC conditions with respect to critical energy infrastructure	Weekly	100% free of data and grammar errors. Contractor shall only	COR/PM

	information (CEII) that the company has access to because of its work for the FERC. The CEII information: Critical Energy/Electric Infrastructure Information (CEII) | Federal Energy Regulatory Commission		tender for acceptance those deliverables that conform to the requirements of this contract.	

8.0 TRAVEL

All travel shall be approved in advance, in writing, by the COR prior to the Contractor incurring any travel-related expenses. The Contractor is responsible for arranging its own travel to and from project sites and shall secure its own rental car when performing site visits. All travel expenses incurred by the Contractor will be reimbursed in accordance with the Federal Travel Regulations and applicable FERC policy.

Special transportation methods, such as helicopters, small aircraft, or boats, are rarely required for this effort. However, if the COR determines that the use of such specialized transportation is advantageous to the Government, the Contractor shall coordinate all necessary arrangements. In these circumstances, FERC will either reimburse the Contractor or the associated company for its pro-rata share of transportation costs, or alternatively, the Government may directly procure and fund the transportation service. In general, it is preferred that the Contractor or company provide the aircraft, boat, or similar transportation equipment and then bill FERC for the Government's proportionate share. The Contractor shall coordinate all related payment arrangements with the COR for submission to FERC's Division of Financial Services.

The Contractor shall not typically accept transportation in company vehicles unless in a sufficient justification exists. However, it is recognized that certain inspection conditions—such as safety concerns or difficult terrain—may warrant the use of a four-wheel-drive or all-terrain vehicle operated by a company representative. In such cases, the Contractor is permitted to ride in the company vehicle without reimbursement to the company.

9.0 ORGANIZATION CONFLICT OF INTEREST

Contractor/Subcontractors shall continually avoid, neutralize, or mitigate any Organizational Conflict of Interest (OCI), as defined in FAR subpart 9.5.

Contractor shall promptly inform and ensure that each of its sub-contractors promptly inform, in writing, the COR regarding any material changes to the information within the documentation submitted pursuant to this provision. Misrepresentation or failure to report any material fact or any fact that should have been known may result in the termination of the contract for default, disqualification of the Contractor from subsequent related contractual efforts, and other remedies as may be permitted by law or this contract.

10.0 QUALITY ASSURANCE/CONTROL

All final documents shall be reviewed and edited by the Contractor to ensure that the document is both technically and grammatically correct. Final documents shall be organized in a logical manner.

The Contractor shall only tender for acceptance those deliverables that conform to the requirements of this contract. The Government reserves the right to inspect all deliverables that have been tendered for acceptance. The Government may require correction of non-conforming deliverables at no increase in price. If correction is not possible, the Government may seek an equitable price adjustment or adequate consideration for acceptance of the non-conforming deliverables.