REQUEST FOR EXPRESSIONS OF INTEREST (CONSULTING SERVICES – INDIVIDUAL CONSULTANT SELECTION)

REPUBLIC OF LEBANON, LITANI RIVER AUTHORITY (LRA)
Lebanon Renewable Energy and System Reinforcement Project (P180501)
Loan No.: IBRD-LB-9731

Assignment Title: Hydrology/hydraulics Expert (DSPOE)

Reference No. (as per Procurement Plan): LB-LRA-513071-CS-INDV

1. BACKGROUND

The Ministry of Energy and Water (MOEW), through the Electricité du Liban (EDL) and the Litani River Authority (LRA), is implementing the Lebanon Renewable Energy and System Reinforcement Project (P180501), funded by the International Bank for Reconstruction and Development (IBRD).

The project aims to strengthen Lebanon's electricity infrastructure through grid modernization, hydropower rehabilitation, and improved sector governance. Within this framework, the LRA is responsible for **Component 2.2: Rehabilitation of the three Hydropower Plants (ABDELAL, AWALI & JOUN) and works to improve QARAOUN Dam Safety**.

2. OBJECTIVE OF THE ASSIGNMENT

The Client (LRA) intends to appoint a **Dam Safety Panel of Experts (DSPOE)** for the Project **to advise on dam safety assessment for Qaraoun dam,** and other technical issues. who will be directly contracted by the LRA on a needs-driven basis.

The general task of the panel is to review all relevant design, engineering, construction and dam safety aspects. The members of DSPOE will be selected by the Client based on the required skill-mix. The members will constitute a group of high-level, internationally-recognized professionals.

These Terms of Reference (TOR) address the specific scope of work for the Hydrology/hydraulics Expert

3- Scope of Work of Hydrology & Hydraulics expert

The primary tasks of the Hydrology & Hydraulics expert of the DSPOE will include, but not necessarily be limited to the following:

(i) Review the hydrological and hydraulic engineering aspects of the design reports for the rehabilitation works on **Qaraoun** , as relevant.

(ii) Review the scouring assessment of the plunge pool, including previous numerical and physical model studies, as well as the rehabilitation design concept for controlling the plunge pool scouring.

(iii) Review the design criteria and specifications of the plunge pool reshaping works from hydraulic / scouring engineering perspective, as well as drawings and construction plans.

(iv) Review the hydraulic design of the spillway gates, including new upstream emergency gates and downstream flood gates, as well as hydraulic profile under various operating conditions.

(v) Review the criteria, methodology and adequacy of design flood, flood routing study, and spillway capacity and recommend measures if any.

(vi) Review and advise on integration of climate change projections into hydrological and flood analyses, testing design floods, spillway capacity and reservoir operating rules across plausible future scenarios.

(vii) Review the overall reservoir operational rules for flood control and power generation including operational records (reservoir water level, inflow, discharge volume, etc.) and hydrological /meteorological monitoring data.

(viii) Review the overall construction plan and the discharge for selected return periods of both upstream and downstream cofferdam arrangements from hydrological and hydraulic aspects.

(ix) Recommend additional actions and measures to assure the safety of the dam's design and construction plan considering potential hydrological / hydraulic risks and required safety level if any.

(x) Review the Construction Supervision and Quality Assurance Plan (CSQAP) as it relates to hydraulic structures and hydrometric monitoring, and advise on adequacy and implementation.

(xi) Review the technical specifications and drawings of the bidding document and provide technical support for the hydraulic design aspects of bidding process, including pre-qualification, bid evaluation, contract negotiations.

(xii) Review the adequacy of hydro-meteorological monitoring instruments, including their numbers, locations, monitoring frequency, etc.

(xiii) Review the Operation and Maintenance Plan and the Emergency Preparedness Plan or Framework Plan regarding the conditions and operational procedures of the spillway gates and other hydraulic outlet facilities.

(xiv) Review sedimentation issues in the reservoir and management strategy / plan for ensuring long term sustainability if relevant.

(xv) Review the quality of contractors/suppliers works and construction supervision regarding hydraulic /scouring engineering aspects related to the plunge pool reshaping and manufacturing / installation of the new emergency gates and new set of stop beams and their conformity to their technical specifications.

(xvi) Coordinate with the DSPOE Chair and other panelists to fulfill assignments in the field and his/her home offices. All formal technical advice and reporting to the Client shall be channeled through the DSPOE Chairperson to ensure a single, consolidated panel report.

(xvii) Attend meetings with the client, its consultants (Designer, Owner's Engineer) and the World Bank to provide independent technical advice as a DSPOE member.

4- Experience and Qualifications Requirements

The Hydrology & Hydraulics expert should meet the following minimum requirements:

- An advanced degree in Hydrology, Hydraulics, Water Resources or related field or other relevant majors,
- Minimum 25 years of experience in relevant professional works,
- Having worked as a hydrologist and hydraulic design expert in designing and construction of large dams including concrete dams, under climate change impact assessment
- Top notch expertise and experience in rock scouring assessment and energy dissipation design of large dams,
- Intensive experience in hydrological and hydraulic aspects of construction plan and schedule for large-scale or complex dam projects.
- Intensive experience of hydrological and hydraulic aspects of dam safety planning, instrumentation and monitoring.

5- DURATION OF ASSIGNMENT

The assignment is expected to cover the entire project implementation period, estimated at three years. The **Hydrology/hydraulics Expert** (DSPOE) will provide services on a needs-driven basis, in accordance with the Terms of Reference (TOR).

The attention of interested Consultants is drawn to Section III, paragraphs **3.13, 3.15, and 3.16** of the World Bank's **Procurement Regulations for IPF Borrowers** (Feb. 2025), which set forth the World Bank's policy on conflict of interest.

A Consultant will be selected in accordance with the **Individual Consultant Selection** method set out in the Procurement Regulations (World Bank's **Procurement Regulations for IPF Borrowers** (Feb. 2025)).

6- SUBMISSION OF EXPRESSION OF INTEREST

Interested individual consultants should submit their **Expression of Interest (EOI) including:**

- **Updated CV** demonstrating relevant experience and qualifications.
- **Cover letter** outlining suitability for the assignment.
- **At least three references** with contact details.

Expressions of interest must be delivered in a written form to the address below (in person, or by E-mail) no later than Mars 26, 2026, at 10:00 a.m. (Beirut Time).

Litani River Authority
Ghannageh Building, 4th floor, Bechara El Khoury Street, Beirut , Lebanon
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