

REQUEST FOR EXPRESSIONS OF INTEREST

(CONSULTING SERVICES: INDIVIDUAL CONSULTANTS)

CONSULTANCY SERVICES TO PROCURE INDEPENDENT PANEL OF EXPERTS (IPoEs) FOR THE PROPOSED BAYNES HYDROPOWER PLANT PROJECT GEOTECHNICAL SPECIALIST

Sector: Energy

Project ID No.: P-Z1-FAB-025

The Southern African Power Pool (SAPP) has received financing from the African Development Bank towards funding the cost of the procuring Independent Panel of Experts (IPoEs) and intends to apply part of the agreed amount for this Grant to payments under the contract for Individual Consultancy Services to procure Independent Panel of Experts (IPoEs) for the Baynes Hydropower and Plant Project (HPP).

1. BACKGROUND

The Baynes Hydropower Plant Project (“the Project”) is a e proposed regional power generation infrastructure project on the Cunene River basin, planned for joint development by the Angola-Namibia Permanent Joint Technical Commission (the “PJTC”).

In 1969 the Governments of Portugal and South Africa entered into an agreement on the first phase of development of the water resources of the Kunene River. The agreement included a plan to develop a hydropower project at Ruacana, to be followed by a series of hydropower projects along the entire river system. This agreement resulted in the construction of three schemes during the 1970s, namely the Gove Dam in Angola, the Ruacana Hydropower Scheme in Namibia, and the Calueque Water Scheme in Angola, which facilitates water supply to the northern parts of Namibia, as well as to irrigation projects inside Angola.

2. PROJECT DESCRIPTION

The Baynes HPP will be situated on the Cunene River, approximately 40km downstream from the Epupa Falls. The Project entails the construction of a 200-metre-high Concrete-Faced Rock-Filled Dam, with a total design capacity of 600MW (i.e., 300MW allocated to Namibia and Angola respectively). The power plant will contribute to balancing regional power markets, improve reliability and security of electricity supply for both Namibia and Angola and to the rest of the SAPP network, as a mid-merit/peaking power. Through the mid-merit/peaking power scheme, the power plant will provide relief to negative impact of variable Renewable Energy generation sources such as solar and wind, prevalent in the two project participating countries.

3. PURPOSE OF THIS ASSIGNMENT

The purpose of this assignment is for the competitive recruitment of competent and professional individuals, who shall perform detailed technical assessments and validations of proposals contained in the preliminary engineering designs and tender documents for the Engineering, Procurement and Construction (EPC) of the proposed 600MW Baynes HPP project, in accordance with ICOLD and other international standards.

4. SCOPE AND IMPLEMENTATION OF THE ASSIGNMENT

The Expert shall be assigned a scope of works relevant to their field expertise. Noting that Experts may be working on common and overlapping tasks, the IPoE Team Leader shall be responsible for the overall harmonisation and coordination of such tasks, to ensure aligned results management.

4.1 The Scope of Works

The scope of the assignment shall include but not be limited to the following:

- (i) The Consultant shall prepare a detailed inception report that shall propose the following aspects among others:
 - Consultant's work plan and methodology that includes work alignment with the other Experts.
 - Consultant's understanding of the Client's ToRs and the assignment in general.
 - Basic infrastructure engineering design considerations, i.e., standards, specifications, and cost estimates of construction units.
- (ii) The Consultant shall review and assess the projects feasibility study report, preliminary engineering design report and tender documents.
- (iii) For each of the reviewed stated reports, the Expert shall provide comprehensive technical opinions/recommendations on the fitness of the technical solutions proposed for EPC readiness and commercial utilisation.
- (iv) The Consultant shall provide a detailed appraisal report justifying all technical opinion/recommendations in terms of their relevance, effectiveness, efficiency, impact and sustainability at EPC and commercial operation stage.
- (v) The Consultant shall recommend a practical risk register, complete with mitigation actions and budget to manage transition to EPC stage.

The scope of the services may be modified as required by each Expert, constituting a panel of the IPoE as per the Client's consent. The Expert shall review, comment, and provide suggestions or recommendations as per discipline of expertise where necessary or as requested by the Client, project sponsors or Development Partners on any subject relevant to the project.

4.2 Implementation Timeline

The planned duration for the implementation of this Individual Consultancy assignment is Twenty-Four (24) months. It is expected that the *Geotechnical Specialist*, in collaboration with the Team Leader, shall propose a works approach or methodology that shall be approved by the Client for implementation. The work plan shall show a schedule of time allocation to office and field work respectively. The Client and the project sponsors shall provide the necessary support to the IPoEs to ensure successful implementation of the assignment.

5.0 GEOTECHNICAL SPECIALIST AND REQUIRED EXPERTISE.

- (i) The personnel should be a professionally registered engineer with a bachelor's degree in civil engineering and a PhD or master's degree in geotechnics and have demonstrated expertise and at least 20 years of experience in geotechnical investigations, laboratory tests, and analysis for large dams with ideally working knowledge of conditions prevailing in Sub-Saharan Region.
- (ii) Expertise shall cover all aspects of geology and geotechnical engineering, from feasibility studies to additional geotechnical investigations, including field investigations, laboratory testing, design of dams, ability to interpret LiDAR based digital maps of surface and underground soil conditions, foundations and underground structures, construction planning, and dam monitoring.
- (iii) She/he should also have a top-notch expertise and experience of the design of treatment works for foundation, abutment, and reservoir rims.
- (iv) The Expert shall be fluent in written and spoken English. Working knowledge of Portuguese will be an advantage.

To undertake the assignment, the *Geotechnical Specialist* shall be required to have the following expertise:

- (i) The Geotechnical Specialist must be a licensed qualified Civil Engineer/Geologist with a bachelor's degree in civil engineering and a PhD or master's degree in geotechnics and have demonstrated expertise and at least 20 years of experience in geotechnical investigations, laboratory tests, and analysis for at least three traceable large dam projects/operations with ideally working knowledge of conditions prevailing in the Sub-Saharan region or similar environments.
- (ii) Expertise shall cover all aspects of geology and geotechnical engineering, from feasibility studies to additional geotechnical investigations, including field investigations, top notch competences in material science and laboratory testing, simulation and interpretation of LiDAR maps, design of dams, foundations and underground structures, construction planning, and dam monitoring.
- (iii) She/he should also have a top-notch expertise and experience of the design of treatment works for foundation, abutment, and reservoir rims.
- (iv) The Expert shall be fluent in written and spoken English. Working knowledge of Portuguese will be an advantage.

The Southern African Power Pool (SAPP) now invites eligible Individual Consultants (IPoEs) to indicate their interest in providing expertise as stated above. Interested consultants must provide information by submitting Curriculum Vitae (CVs) indicating that they are qualified to perform the services including, description of similar assignments, experience in similar conditions, etc.

6.0 ELIGIBILITY

Eligibility criteria, establishment of the short-list and the selection procedure shall be in accordance with the African Development Bank's "*Procurement Policy for Bank Group Funded Operations*", dated October 2015, which is available on the Bank's website at <http://www.afdb.org>

Interested consultants may obtain further information at the address below during office hours 08:00 AM – 16:00 PM. Kindly visit the SAPP website at <http://www.sapp.co.zw> and a template of the Curriculum Vitae (CV). Please attach an updated CV based on the template provided for the above required expertise.

Expressions of interest must be delivered to the address below or by email by *1st August 2022 at 16:00* hours CAT and mention “*Consultancy Services to procure Independent Panel of Experts (IPoEs) – Geotechnical Specialist for the Baynes Hydropower and Plant Project (HPP)*”.

Attn:

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