



## REQUEST FOR EXPRESSIONS OF INTEREST (Short Term Consultancy Service - RCC Dam Construction/Individual)

Nam Ngiep 1 is a hydropower project under construction in the central provinces of the Lao PDR. The Nam Ngiep 1 Power Company (NNP1PC), co-owned by Kansai Electric Power of Japan, EGAT International of Thailand, and the Lao Holding State Enterprise, is building a 290-MW power plant to provide clean renewable electricity and contribute to poverty reduction in Laos. NNP1PC hereby invites Individual Consultants to indicate their interest in the following assignment:

**Contract Ref No.** : NNP1PC-IC-TD-2016-04

### 1. OBJECTIVE OF ASSIGNMENT

The principal aim of the appointment is as follows:

- to supervise Roller Compacted Concrete (RCC) placement works conducted by the Contractor and train the site inspectors of the Owner, Nam Ngiep 1 Power Company Limited (NNP1), to have sufficient expertise and skill to detect defects/deficiencies/the other anomalous condition on the site and instruct the Contractor to bring them back to right way; and
- to investigate and advise on those modifications that may be necessary to the existing aggregate crushing plant as presently constructed and its operation to achieve production, economically and efficiently, of an average 20 % of so-called 'stone powder' (finer than 75 µm) in the fine aggregate (sand). This is to be carried out using rock exploited from the Project quarry and by operational improvements to the aggregate management system from the quarry through the aggregate crushing plant to the RCC batching plant, based on the planned mix proportions determined by trial mixes for RCC below.

No	VeBe Value (sec)	Total RCC Weight (kg/m <sup>3</sup> ) (i)	W/C:F (%)	S/a (%)	Unit Weight (kg/m <sup>3</sup> )							Target Stone Powder Ratio in Sand (%) (v)	Stone Powder Amount in Sand (kg/m <sup>3</sup> ) (vi)=[(v)×(v)]	Total Stone Powder Ratio (%) ((ii)+(iii)+(vi))/(i)
					Water	Cement (ii)	Fly ash (iii)	G1	G2	G3	Sand (iv)			
RCC-1	12-20	2,350	76.7	37.2	115	70	80	587	392	257	846	18.5	156	13.0
RCC-2	12-20	2,350	83.8	37.2	109	60	70	527	400	343	815	21.6	176	13.0

[Coarse Aggregate]

G1: 50mm – 25mm, G2: 25mm – 12.5mm, G3: 12.5mm – 5mm

The Consultant shall provide the following:

- Particular technical specification of RCC placement works for Main Dam;
- An economical and efficient plan of a revised plant system with necessary modifications to improve the plant operation and to achieve the capture of the required quantity of 'stone powder' in particular, in good time for the start of RCC placement at the main dam;
- Understand fully the current status of the plant system from the quarry, the aggregate crushing plant and the RCC batching plant;
- Monitor the plant system periodically in QA/QC aspects and assist the Owner's QA/QC team;
- Explain the plan succinctly to the Owner, Contractor, Subcontractors and associated auditors, partners, panels and stakeholders;
- Advise and if necessary have the Owner Instruct and control the Contractor through the owner's staff on the detailed procedure to complete the plan;
- In cooperation with the Contractor and Owner, monitor and adjust the new plant system after its completion and during early placement of RCC at the main dam;
- Technical transfer for management of the plant system to NNP1 and Contractor responsible;
- Supervising RCC placement works by Contractor;
- Training NNP1 site inspectors for supervising and monitoring RCC placement works; and
- Making an interim report and comprehensive report with presentation to NNP1.

### 2. CONTRACT DURATION:

- Until 31 March 2017, but the contract might be extended according to the Owner's evaluation to the Consultant
- Not less than 75 working days in total



### 3. PROFESSIONAL BACKGROUND AND QUALIFICATIONS

- Internationally experienced and an skilled to develop and supervise technically and functionally the whole process of exploitation of aggregate from the quarry, through the aggregate crushing plant to the RCC batching plant to provide the constituent parts of the RCC mix as designed with collaboration between the subcontractors.
- Good engineering and interpersonal skills, and ability to work strategically and with insight and communication based on knowledge and experience of international contracts.
- Bachelor's degree in civil engineering with further degree preferred.
- Self-starter with good working attitude and ability to multi-task.
- Leadership, communication and coordination skills.
- Ability to work under pressure and unsupervised.
- Good cross-cultural communication skills and cooperative attitude.
- Good skills in writing, speaking, recording and reporting in English.

Expressions of Interest must be received at the address below no later than **Tuesday 18th October 2016 before 17:00pm**, local time and specifically mentioning **"Expression of Interest for RCC Dam Construction"**.

Interested Consultants may obtain application form and further information by email at the address below during office hours;

**Xaythinh Philamakhot (Mr), Manager, Procurement and Contract Department, Administration Division, Nam Ngiep 1 Hydropower Project, House No. 236, Unit 16, Ban Phonesinuan, Sisattanak Dist. Vientiane Capital, Lao PDR, Telephone: + 856-21-265185, Facsimile number: +856-21 265186, Mobile Number: +856-20-22303344, 20-56795671, Email: xaythinh.p@namngiep1.com,**

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