एसजेवीएन अरुण-३
पावर डेवलपमेण्ट कम्पनी (प्रा.) लि.
(भारत सरकार र हिमाचल सरकारको संयुक्त कम्पनी,
एसजेवीएन लिमिटेड बाट स्थापित कम्पनी)

Regd. No.: 111808/69/070

SJVN Arun-3
Power Development Company (P.) Ltd.
(A company promoted by SJVN limited,
joint venture of Govt. of India and Govt.of H.P.)

Ref. No. SAPDC/CE (P&C)/PCD-138/2019-1525 **Dated: 19.06.2019**

ARUN-3 HYDROELECTRIC PROJECT (900 MW)

CLARIFICATIONS/MINUTES OF PRE-BID MEETING

Subject: PCD-138/2019: Supply, Installation & Monitoring of first stage Geotechnical Instruments for Arun-3 HEP, Sakhuwasabha, Nepal -Regarding clarification.

Employer : SAPDC

Country : NEPAL

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
Notice Inviting Tenders (NIT) and Information for Bidders (IFB)				
1.	ITB Clause 11.2 of Section-II	The bidder shall offer rates & prices in the Priced Schedule/Bill of Quantities of the Bidding documents. The quoted rates shall be inclusive of all taxes, duties, GST (if applicable), Custom (If applicable), Transportation, Transit insurance etc. excluding VAT. VAT shall be reimbursed on production of documentary evidences. SAPDC shall not bear anything extra (except VAT) on this account.	**1.** Please provide details of taxes/Custom duty applicable of instruments if supplies are made from India. Is there any exemption for this HEP project. Please clarify. **2.** Please inform rate of VAT applicable in Nepal. **3.** Please confirm whether WCT (work contract tax), PF, ESI, insurance are required or not.	Bidder is requested to ascertain the same from concerned authorities of Nepal.
2.	ITB Clause 14.1 to 14.6 of Section-II	Bid Security/EMD Bank Guarantee in INR shall be acceptable only if these are issued by a Scheduled Bank of India duly counter guarantee by any A class bank in Nepal.	**1.** We are a Micro and Small enterprises (MSME) registered with NSIC under Single Point Registration Scheme. We are therefore exempted for furnishing EMD/Bid Security. Copy of NSIC certificate is attached for your reference. **2.** You have mentioned that Bank Guarantee in INR shall be acceptable only if these are issued by a Scheduled Bank of India duly counter guarantee by any A class bank in Nepal. Whereas we have been informed by our banker HDFC bank that the Bank Guarantee will be issued by Nabil Bank Nepal in INR and HDFC Bank which one of the scheduled banks of India will duly counter guarantee. Please confirm.	1. MSME scheme is not applicable in Nepal. 2. Existing Provisions shall prevail.

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3.	Cost of Tender Document (Non-refundable)	NPR 8,000/- (INR 5,000/-) in the form of Bank Draft/Manager's cheque payable at Khandbari, Nepal in favour of SJVN Arun-3 Power Development Company Pvt. Ltd. Alternatively, payment against cost of Tender Document/EMD may also be made directly in the following account of SAPDC, However, proof of same shall be submitted by the Bidder with the Bid in Part-I(Envelope-I):- **NPR Account Details:- Everest Bank Limited Acc. No. 00800105200477 Swift Code: EVBLNPKA** **INR Account Details Everest Bank Limited Acc. No. 06100105200091 Swift Code: EVBLNPKA**	**Amount against cost of Tender Document/EMD is not getting credited in INR account.**	Technical problem is being faced for getting credit in INR account. Bidders may request concerned bank to credit amount against cost of Tender Document/EMD in NPR account of SAPDC. Bidders may ensure credit of amount against cost of Tender Document/EMD as per provisions of Tender Document. Provision of making payment against cost of Tender Document/EMD in **INR account has been deleted.** **Refer Amendment No. III.**
4.	Clause no. 3(b) of Eligibility Criteria under Notice Inviting Tender	Similar Work means "Supply, Installations and Monitoring of Electro-mechanical (EM) Load Cell, EM Borehole Extensometer, Inclinometer casing, V-W joint meter, Piezometer, Strain meter and Bi-reflex in any project". Drilling of total length not less than 650 meter in any single or multiple Project (s)". Drilling of 80 mm dia drill hole of not less than 30 meter length in	We have strong objection in this Clause of eligibility qualification criteria. We would like highlight the points as follows: According to point no. 2 i.e. Installation mentioned under scope of work – For installation of Piezometers and Inclinometers 100 mm dia of cored hole is required to be drilled by agency whereas for all other instruments like MPBX and SPBX the drilling will be done by main contractor. When all other drillings are being drilled by the main contractor then there is no point to put this drilling	**Refer Amendment No. III**

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
		any single project.	work of piezometers and inclinometers in instrumentation agency' scope. **Please note that drilling done though main contractor will be more <u>economical</u> rather than done by instrumentation agency as any agency will include charges for mobilization/demobilization, construction of platform and also load their profit/margin.** We request that all drilling works should be in main contractor' scope as they have sound knowledge and experience of drilling works. **Please amend this Clause as follows:** **Similar Works means "Supply, Installation and Monitoring of Electro-mechanical (EM) Load Cell, EM Borehole Extensometer, Inclinometer casing, V-W joint meter, Piezometer, Strain meter and Bi-reflex in any project.** Please clarify the detail of "similar works" means, Do you need instrumentation/ drilling of borehole to be covered in single contracts or multiple contracts it is not clear to us please clarify.	
5.	Item no. 1 Part-A Schedule-A Bill of Quantity	Electro-mechanical Load Cell (Rock bolt) (Facility to take Electrical and Mechanical reading both at a time) Specifications: -Capacity: upto 35 Tons - Mechanical readout: Inbuilt	You have asked for potentiometric type electro-mechanical load cells whereas vibrating wire or resistive strain gage type load cells are required worldwide by various organizations. Therefore please amend as per following:	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
		- Electrical sensor: Potentiometric - Safe overload: 50% of capacity - Accuracy: +/-0.02% FSR - Resolution: 0.01% FSR with electrical readout - Operating temp.: -10 to 80°C - Material: Stainless steel	Electro-mechanical load cell (rock bolt) (facility to take electrical and mechanical reading both at a time) Specifications: Capacity: up to 35 tons Mechanical readout: inbuilt **Electrical sensor: Potentiometric, vibrating wire, resistive strain gage type** **Safe overload: 150% of capacity** **Accuracy: ± 0.25% FSR** Resolution: 0.01% FSR Operating temp: -10 to 80°C Material: Stainless steel	
6.	Item no. 2 Part-A Schedule-A Bill of Quantity	Electro-mechanical Load Cell (For Ribs) (Facility to take Electrical and Mechanical reading both at a time) Specifications: - Capacity: upto 100 Tons - Mechanical readout: Inbuilt - Electrical sensor: Potentiometric - Safe overload: 50% of capacity - Accuracy: +/-0.02% FSR - Resolution: 0.01% FSR with electrical readout - Operating temp.: -10 to 80°C	You have asked for potentiometric type electro-mechanical load cells whereas vibrating wire or resistive strain gage type load cells are required worldwide by various organizations. Therefore please amend as per following: Electro-mechanical load cell (rock bolt) (facility to take electrical and mechanical reading both at a time) Specifications: Capacity: up to 100 tons	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
		- Material: Stainless steel	Mechanical readout: inbuilt **Electrical sensor: Potentiometric, vibrating wire, resistive strain gage type** **Safe overload: 150% of capacity** **Accuracy: ± 0.25% FSR** Resolution: 0.01% FSR Operating temp: -10 to 80°C Material: Stainless steel	
7.	Item no. 1 & 2 Part-A Schedule-A Bill of Quantity	**Electro-mechanical Load Cell (Rock bolt) (Facility to take Electrical and Mechanical reading both at a time)** Specifications: - Capacity: upto 35 Tons - Mechanical readout: Inbuilt - Electrical sensor: Potentiometric - Safe overload: 50% of capacity - Accuracy: +/-0.02% FSR - Resolution: 0.01% FSR with electrical readout - Operating temp.: -10 to 80°C - Material: Stainless steel **Electro-mechanical Load Cell (For Ribs) (Facility to take Electrical and Mechanical reading both at a time)** Specifications:	**Load Cell** – It has been mentioned that you require electro mechanical load cell with potentiometric sensor. We would like to bring in your notice that if mechanical load cell need to be monitored manually and additional manpower and facilities (moving platform) is required to access the location and it will be practically not possible and economically unviable after benching down. Mechanical load cell are less accurate compare to least Vibrating wire technology. We would like to appraise you that vibrating wire load cell are recommended and widely used by all Govt. / Semi- Govt. / PSU (NHPC/NTPC/THDC/WAPCOS/HPPCL/JKPDC/UJVNL PHPA-BHUTAN etc.), in India for similar UG works. Recognized and leading manufacturer worldwide	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
		- Capacity: upto 100 Tons - Mechanical readout: Inbuilt - Electrical sensor: Potentiometric - Safe overload: 50% of capacity - Accuracy: +/-0.02% FSR - Resolution: 0.01% FSR with electrical readout - Operating temp.: -10 to 80°C - Material: Stainless steel	manufacturers instruments of vibrating wire technology, for UG cavities/works. It is requested to amend the specification of load cell to vibrating wire which are usually used in HEP as VW load cell are more accurate, rugged, suitable for high humid environment and there is no "data loss" as there is no voltage drop over long distance.	
8.	Item no. 3 Part-A Schedule-A Bill of Quantity	Multi Point Borehole Extensometer (Electromechanical) (Facility to take Electrical and Mechanical reading both) Specifications: - Electrical sensor: Potentiometric - No. of Anchor: upto 5 nos. - Depth of hole: upto 25m - Diameter of hole: 100mm - Measuring range: upto 250mm - Sensitivity: 0.01mm & accuracy 0.1 mm - Resolution: 0.01mm - Operating temp.: 0 to 80°C - Material: Stainless steel - Cable will be protected with suitable PVC pipe	**1.** You have asked for potentiometric type electro-mechanical multi-point borehole extensometer whereas vibrating wire multi-point borehole extensometers are required worldwide by various organizations. Therefore please amend as per following: Multi-point borehole extensometer (electro-mechanical) (facility to take electrical and mechanical reading both at a time) Specifications: **Electrical sensor: Potentiometric, vibrating wire, resistive strain gage type** **No. of anchor: upto 5 nos. (Please specify depth of various anchors)** Depth of hole: upto 25 m	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
			Diameter of hole: 100 mm **Measuring range: upto 100 mm as 250 mm is not required** Sensitivity: 0.01 mm & accuracy 0.1 mm Resolution: 0.01% FSR Operating temp: -10 to 80°C Material: Stainless steel **2. Multipoint Borehole Extensometer** – It has been mentioned that you require electro mechanical MPBX with potentiometric sensor. We would like to bring in your notice that if mechanical MPBX need to be monitored manually and additional manpower and facilities (moving platform) is required to access the location and it will be practically not possible and economically unviable after benching down. Mechanical MPBX are less accurate compare to least Vibrating wire technology. We would like to appraise you that vibrating wire MPBX are recommended and widely used by all Govt. / Semi- Govt. / PSU (NHPC/NTPC/THDC/WAPCOS/HPPCL/JKPDC/ UJVNL PHPA-BHUTAN etc.), in India for similar UG works. Recognized and leading manufacturer worldwide manufacturers instruments of vibrating wire technology, for UG cavities/works.	

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
			It is also requested to clarify how both (Electrical and mechanical) measurements are possible simultaneously measured.	
9.	Item no. 4 Part-A Schedule-A Bill of Quantity	Single Point Borehole Extensometer (Electromechanical) (Facility to take Electrical and Mechanical reading both) Specifications: - Electrical sensor: Potentiometric - No. of Anchor: 1 no. - Depth of hole: 10m - Diameter of hole: upto100mm - Measuring range: upto 250mm - Sensitivity: 0.01mm & accuracy 0.1 mm - Resolution: 0.01mm - Operating temp.: 0 to 80°C - Material: Stainless steel	You have asked for potentiometric type electro-mechanical multi-point borehole extensometer whereas vibrating wire multi-point borehole extensometers are required worldwide by various organizations. Therefore please amend as per following: Multi-point borehole extensometer (electro-mechanical) (facility to take electrical and mechanical reading both at a time) Specifications: **Electrical sensor: Potentiometric, vibrating wire, resistive strain gage type** No. of anchor: 1 no. Depth of hole: upto 10 m Diameter of hole: 100 mm **Measuring range: upto 100 mm as 250 mm is not required** Sensitivity: 0.01 mm & accuracy 0.1 mm Resolution: 0.01% FSR	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
			Operating temp: 0 to 80°C Material: Stainless steel	
10.	Item no. 8 Part-A Schedule-A Bill of Quantity	Strain Bar Specifications: - Electrical Sensor - Measuring range: 500mm - Resolution: 0.01mm - operating temp.: -10 to 80°C	We understand that measuring range is not correct. Measuring range should in µ strain however you have mentioned in mm. Therefore please amend as per following: Strain Bar: Specifications: Electrical sensor **Measuring range: ± 1500 µ strain** Resolution: 0.01 mm Operating temp: -10 to 80°C	Existing Provisions shall prevail.
11.	Item no. 12 Part-A Schedule-A Bill of Quantity	Electrical Readout for Load Cell Specifications: - Compatible to Potentiometric sensor - Digital display - Operating temperature: 0 to 55°C	You have asked for potentiometric type electro-mechanical load cells whereas vibrating wire or resistive strain gage type load cells are required worldwide by various organizations. Therefore please amend as per following: Electrical read out for load cell: Specifications: **Compatible to potentiometric, vibrating wire, resistive strain gage type sensors** Digital display Operating temperature: 0 to 55°C	Existing Provisions shall prevail.

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
12.	Item no. 13 Part-A Schedule-A Bill of Quantity	Electrical Readout for SPBX & MPBX Specifications: - Compatible to Potentiometric sensor - Digital display - Operating temperature: 0 to 55°C	You have asked for potentiometric type SPBX and MPBX whereas vibrating wire type SPBX & MPBX are required worldwide by various organizations. Therefore, please amend as per following: Electrical read out for SPBX & MPBX: Specifications: **Compatible to potentiometric, vibrating wire type sensors** Digital display Operating temperature: 0 to 55°C	Existing Provisions shall prevail.
13.	Item no. 11 & 12 Part-B Schedule-A Bill of Quantity	Mechanical dial gauge and mechanical depth gauge	You have asked to install 3 nos. mechanical dial gauges and 3 nos. mechanical depth gauges, whereas these items are not mentioned in Part-A i.e. supply. **We understand that SAPDC will provide these gauges to the instrumentation vendor for successfully installation at site. Please confirm!**	The rate of mechanical dial gauge and mechanical depth gauge is included in readout unit of load cell, MPBX and SPBX.
14.	Item no. 8 Part-A Schedule-A Bill of Quantity	Strain Bar Specifications: - Electrical Sensor - Measuring range: 500mm - Resolution: 0.01mm - operating temp.: -10 to 80°C	Strain Bar – What is purpose of Strain Bar. Usually strain is measured in microstrain and your specification depicts 500 mm. Please clarify.	Existing Provisions shall prevail.
15.	Section-I-A Detailed Scope of work	Drilling for Instrumentation	Please specify following: • Schedule of drilling including tentative duration of completion of the installation of inclinometer and piezometer	Kindly Refer 'Detailed Scope of Work and Technical Specification'**.**

Sr. No	Clause No.	Provision in Bid Documents	Summary of Bidders' Query / Modification requested	SAPDC Response/ Comments
			• Accessibility to borehole location Subsurface geological details of location where inclinometer and piezometer to be installed	
16.	Section-I-A Detailed Scope of work	Data Analysis	You required data analysis and interpretation, please specify the deliverables	Existing Provisions shall prevail.
17.	Section-I-A Detailed Scope of work	Accommodation for engineers	We request you to provide accommodation for engineers during execution of the project near project site, such that can concentrate on Instrumentation and Monitoring works, rather than spending time on travelling.	Existing Provisions shall prevail.