The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
1.	Volume – I, Section 2 : Instruction to Bidder, Clause # 3 : Page 28  ELIGIBILITY AND QUALIFICATIONS OF	the ELIGIBILITY AND QUALIFICATIONS OF INTENDED	The experience of the bidding company or its subsidiary company/ Holding company within last five years will be
	INTENDED PROSPECTIVE BIDDER	PROSPECTIVE BIDDER Crieria as below:	considered for meeting the qualifying criteria.
	In case the bidder is a holding company, the experience for meeting the Qualification Requirement shall be of holding company only (i.e. excluding its subsidiary/group companies).	In case the bidder is a holding company, the experience for meeting the Qualification Requirement shall be of holding company and / or including its subsidiary/group companies.	The bidding company shall provide sufficient proof of the experience of the Holding/Subsidiary company which were executed during the last five years and the proof of legal relationship between the subsidiary/holding company.
	In case the bidder is subsidiary of holding company the experience for meeting the qualification requirement shall be of that subsidiary company only. (i.e. excluding its holding company).		Further, Please refer Amendment No. 7.
2.	Volume – I, Section 2: Instruction to Bidder, Clause # 38.1 Page 56  Within 15 calendar days of issue of Work Order from KSEBL, the successful bidder shall furnish to KSEBL, a Performance	We understand that Bidder has to submit the Performance Guranetee only and no Performance Security deposit is required.  Please confirm our understanding is correct.	"Performance Security Deposit"/"Security Deposit" of 5% of contract price (in the form of Bank Guarantee) shall be provided by the successful bidder within 15 calendar days of issue of Work Order from KSEBL.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Security Deposit (PSD) as per the Sample form E of Section 4 in the form of a Bank Guarantee or DD for an amount equivalent to 5 (five) percent of the contract price. The performance Security shall be in the form of DD/BG from a Nationalized Bank or Scheduled Bank except Indus Ind Bank.		However, as per clause no. 4.9 of Section-2, ITB, the Performance Bank Guarantee of 10% of contract price shall be provided by the contractor before release of final payment with validity till the end of warranty period.
3.	Volume – I, Sample Form D Contract Agreement Format,Pg.117	As per this clause it is mentioned that there will be "no revision of rates for the works shall be allowed on any ground or any reason"	·
	ARTICLE V- RATES TO HOLD GOOD	In case project is deleved and	
	IN CASE THE PERIOD OF THE CONTRACT IS EXTENDED:	In case project is delayed and contractor is not responsible for the delay, we request you to consider the revision of rates by mutual agreement.	
	The rates agreed by the Contractor as per	revision of fates by mutual agreement.	
	schedules Supply and Work orders respectively and accepted by the KSEBL shall hold good for all works done towards		

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
140.	the completion of the contract whether		
	within the period mentioned herein or		
	during the mutually agreed extended		
	period, if any. No revision of rates for the		
	works shall be allowed on any ground or		
	on any reason.		
4.	Volume – I, Annexure I, Price Variation	We request you to consider the Price	Bolts and Nuts used for towers are
	Page 183	Variation for the following Items :	included in the weight of tower, for which
		1. Bolts and Nuts	price variation is applicable.
	PRICE VARIATION CLAUSE FOR	2. Hardware Fittings	
	TRANSMISSION LINE TOWERS -	3. Instllation including Civil Works	Price variation for all other Bolts and
	TOWER EXTENSIONS OTHER	4. Reinforcement Steel	Nuts, Hardware Fittings, Installation
	SPECIAL STRUCTURES.	5. Concreting	including Civil Works, Reinforcement
		Price Variation for all the above items is given by PGCIL. Hence, we request	Steel and Concreting are not applicable.
		you to consider the Price Variation for	Further, Provisions of Bid Document
		all the above items.	shall prevail.
5.	Volume - I, SECTION- 5, GENERAL	We request you allow the payments on	Provisions of Bid Document shall
	CONDITIONS OF CONTRACT	supply of Materials for Supply items i.e.	prevail.
	<b>D</b>	Tower, Conductor, OPGW, Insulator	
	Payment Term	etc	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
6.	Volume – I, SECTION- 1C, Clause 5, Page 16 "Completion Period" The period of completion of work shall be 18 months reckoned from the official date of commencement, which is 15 days after the date of issue of work order or the date of the agreement, whichever is earlier.	<ul> <li>a) Considering the volume, terrain, &amp; weather condition the completion period of 18 months (including monsoon) may be extended by six months.</li> <li>b) As many supply items has to come from outside the state inspection and dispatch instructions shall be time bound from the proposed date of readiness of materials.</li> </ul>	Provisions of Bid Document shall apply.
7.	Volume - I, Section 2 : Instruction to Bidder, Clause # 3 Page 30	Document which can be submitted in support financial criteria.	Bidder can choose the best 3 years out of last 5 years to meet this requirement.
	Eligibility And Qualifications Of Intended Prospective Bidder Minimum Average Annual Turnover *(MAAT) for best three years i.e. 36 months out of last five financial years of the bidder should be Rs. 300 Crores (Indian Rupees Three Hundred Crores Only).	Audited Annual Report of last 5 year / 3 year	However, the bidder has to submit the audited annual report for the last five years.

The SI.	Clause No. and Existing provision	Clarification required	Clarifications
No.			
8.	Volume – I, Section 2 : Instruction to Bidder, Clause # 3 Page 31	Document which can be submitted in support financial criteria.	For meeting Net Worth Requirement, bidders are required to submit Audited
	Eligibility And Qualifications Of Intended Prospective Bidder	Audited Annual Report of last 5 year / 3 year	Annual Report of last 3 years.
	Net worth for last 3 financial years should be at least equal to Rs. 150 Crores (Indian Rupees One Hundred and Fifty Crores Only).		
9.	Volume – I, Section 2 : Instruction to Bidder, Clause # 3 Page 31	Document which can be submitted in support financial criteria.	Confirmed. From any nationalised/scheduled banks.
	Eligibility And Qualifications Of Intended Prospective Bidder	Cerificate issued by Bank (s)	
	Solvency certificate issued within 6 months prior to the date of originally scheduled submission of bid shall be a minimum of Rs. 150 Crores (Indian Rupees One Hundred and Fifty Crores Only).		

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
<b>No.</b> 10.	Volume – I, Section 2: Instruction to Bidder, Clause # 3 Page 30  Eligibility And Qualifications Of Intended Prospective Bidder Minimum Average Annual Turnover *(MAAT) for best three years i.e. 36 months out of last five financial years of the bidder should be Rs. 300 Crores (Indian Rupees Three Hundred Crores Only).  The bidder should have executed or under execution similar works in Power Transmission for the last three years for the value at least 50% of the turnover mentioned above per year.	The MAAT required is Rs 300 crs for 3 year in best of 5 year the Execution or under execution similar works in power transmission for last three years for value at least 50 % of MAAT . i.e avarage Rs150 Cr. for 3 year in best of 5 year .  As the Rs 300 Cr. Is MAAT for best three years out of last five years so the value of works executed in Powe transmission shall also be the 50 % MAAT mentioned above .  Document which can be submitted in support financial criteria- Annual reports are financial audited report for company and not Project wise / sector wise audit report. Statement by company to be given.  The bidder should have executed or	Any of the following documents shall be submitted in support of works executed/under execution in transmission business:  1. Work Order with prices 2. Client's certificate 3. CA's certificate showing turnover project-wise  Bidder shall have to substantially prove that they have executed or have under execution similar works in Power Transmission for the cumulative value of at least 50% of the MAAT.
		under execution similar works in Power Transmission for the last three years for the value at least 50% of the MAAT	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		mentioned above.	
11.	Volume - I, Section 2 : Instruction to	The Prospective bidder and its	No Change.
	Bidder, Clause # 4.9 Page 32	Manufacturers shall agree to provide	
	The Prospective bidder and its Manufacturers shall agree to provide guarantee for 7 years against manufacturing defect / defective workmanship from the date of Commissioning and Handing over Date (CHD). The performance Bank Guarantee equivalent to 10% of the contract value shall be provided by the bidder and maintained during the entire guarantee period. Usually the defect notice period will be one month prior to the warranty expiry or as specified in the Tender documents.	guarantee for <b>2 years</b> against manufacturing defect / defective workmanship from the date of Commissioning and Handing over Date (CHD) <b>and further 5 years gaurentee for latent defect</b> . The performance Bank Guarantee equivalent to 10% of the contract value shall be provided by the bidder and maintained during the entire guarantee period.	Provisions of Tender Document shall apply.
12.	Volume – I, Section 2: Instruction to	In Clause 2 (b) , For HTLS Installation	Agreed.
	Bidder, Clause 3 Page 30	experience & OPGW Stringing, we request you to kindly amend the clause	The following Amendment is issued.
	2(b) For the bids with HTLS conductors,	as per EOI and earlier tenders as	'If the bidder or his supplier is having

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	the bidder who qualifies in Clause 1a or 1b or 1c and 1d shall also have experience in installation / re-stringing / stringing works with HTLS conductors like Carbon Composite Core conductor of at least 250 ckt km of 110kV or above voltage level lines during last Five years in India as on date of bid opening for all HLTS works, out of which 100 ckt km shall be successfully in operation for a period of Two years as on originally scheduled date of bid opening.	"If the bidder is having less than 2 years operation experience as above for items 2b, 2c then the payment for the bidder shall be made against additional PBG for two years equivalent to the amount claimed for the above said items, in addition to the PBG requirement of the tender or the 10% on the final bill after CHD will be delayed that many years (Part year will be treated as one year) operations experience less than the stipulated operations experience of Two years i.e if the operations experience of the bidder is less than one year the payment of 10% will be delayed by two years, otherwise delay in releasing the payment will be one year from CHD, by this time the said item will be in service/operation for the required	less than 2 years operations experience for items 1(d), 1(e), and 1(f) as above then the payment for the bidder shall be made against additional PBG (Performance Bank Guarantee) for two years equivalent to the amount claimed for the above said items, in addition to the PBG requirement of the tender or the 10% on the final bill after CHD will be delayed that many years (Part year will be treated as one year) operations experience less than the stipulated operations experience of Two years i.e if the operations experience is less than one year the payment of 10% will be delayed by two years otherwise delay in releasing the payment will be one year from CHD, by this time the said item will be in service/operation for the required period in KSEB transmission system.'  'If the bidder is having less than 2 years operation experience as above for items 2b and 2c then the payment for the

The SI. No.	Clause No. and Existing provision	Clarification red	quired		Clarifications
		period in KSEB			PBG for two years equivalent to the amount claimed for the above said items, in addition to the PBG requirement of the tender or the 10% on the final bill after CHD will be delayed that many years (Part year will be treated as one year) operations experience less than the stipulated operations experience of Two years i.e if the operations experience of the bidder is less than one year the payment of 10% will be delayed by two years, otherwise delay in releasing the payment will be one year from CHD, by this time the said item will be in service/operation for the required period in KSEB transmission system.'
13.	Volume - I, Section 2 : Instruction to	Kindly provide	tne short	name t	The DD and Bank Guarantees shall be

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Bidder, Clause # 18.1 Page 45 The Bidder can purchase the document from the office of PFCCL by submitting a Demand Draft of Rs 15,000/- plus GST @ 18% in favour of Deputy Chief Engineer with full powers of Chief Engineer, Trans GridNorth, Kerala State Electricity Board Limited, VydyuthiBhavanam, Kallipadam P.O., Shoranur- Kerala 679 122, payable at Shoranur from a scheduled bank selected by the bidder. The bidder can also download the tender document online however bidder has to deposit the Demand Draft of Rs 15,000/- plus GST @ 18% along with the submission of bid on due date and time.	issuing Demand Draft towards tender fee to be drawn.  Kindly allow shorter name for issuing Demand Draft towards Tender Fee to be drawn in favour "Deputy Chief Engineer with full powers of Chief Engineer, Trans Grid North, Kerala State Electricity Board Limited, payable at Shoranur"  We suggest as "DD in favour of Chief Engineer, TransGrid, Shoranur payable at Shoranur."	
14.	Volume – I, Section 2 : Instruction to Bidder, Clause # 18.1 Page 46  The Bid Security shall, at bidder's option, be in the form of crossed bank draft/pay order/banker certified cheque or a bank	Please provide below Bank details for issuing EMD Bank Guarantee using SFMS Platform for subject tender.  1) Name of Bank & Branch :	The requisite information is furnished below:  Name of Bank & Branch: SBI, Shoranur  Bank Account Name: Chief Engineer

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	guarantee in favour of Deputy Chief Engineer with full powers of Chief Engineer, Trans Grid North, Kerala State Electricity Board Limited, VydyuthiBhavanam, Kallipadam P.O., Shoranur- Kerala 679 122, payable at Shoranur from a scheduled bank selected by the bidder. The format of the bank guarantee shall be in accordance with the form of bid security included in the Bidding Documents. Bid security shall remain valid for a period of thirty (30) days beyond the original bid validity period, and beyond any extension subsequently requested under ITB Sub-Clause 17.2.	2) Bank Account Name :  3) Bank Account Number :  4) RTGS/IFSC CODE No. :	TransGrid  Bank Account Number : 37321524620  IFSC CODE No. : SBIN0070787
15.	Volume – I, Section 2: Instruction to Bidder, ITB 4.10 & Sample D - CONTRACT AGREEMENT FORMAT 4.10 Upon Commissioning and Handing over, the bidder must provide technical support and training for KSEBL staff and officers for Operation & Maintenance of the line as the conditions stipulated in	We understand that the one time training Upon Commissioning and Handing over of line to be provided. We request you to provide the number of staff to be trained and number of days of technical support and training to be imparted.	Two-day training for 10 engineers per project is envisaged.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	tender documents.		
	ARTICLE X – PERFORMANCE		
	GUARANTEE		
	Total guarantee period including the		
	defect liability period shall be limited to 84		
	months. Defect notice period may be		
	taken as 3 months prior to warranty		
	expiry and the defect rectification		
	period will be 30 days from the defect		
	intimation. During the warranty period,		
	the bidder must provide technical		
	support and training for KSEBL staff		
	and officers for O&M of the line as per		
	the conditions stipulated in tender		
	documents.		
16.	Volume - I, Section 2 : Instruction to	We understand the above shall be	Confirmed
	Bidder, Clause # 38.1 Page 56	Security Deposit which shall be valid till	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Within 15 calendar days of issue of Work Order from KSEBL, the successful bidder shall furnish to KSEBL, a Performance Security Deposit (PSD) as per the Sample form E of Section 4 in the form of a Bank Guarantee or DD for an amount equivalent to 5 (five) percent of the contract price. The performance Security shall be in the form of DD/BG from a Nationalized Bank or Scheduled Bank except Indus Ind Bank.	CHD.	
17.	Volume – I, Section 5, General Conditions Of Contract, clause 41 (a), Payment Terms  1) 1% as interest free mobilization advance against separate BG, which will be adjusted in future bills.	1 % interest free advance may be corrected to 10 % interest free advance.  As per the Payment Terms, we understand that interest free mobilization advance against separate BG is 10% instead of 1% as mentioned the specification. Kindly confirm.	Provisions of Tender Document shall apply.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
18.	Volume – I, Section 2 : Instruction to Bidder, Clause 16.2 Page 44	Kindly confirm whether Labour Cess will be deducted on Erection portion of the contract only or on Supply portion also. Please confirm the applicable percentage of Labour Cess.	Welfare Fund) will be applicable only on
19.	Volume :1, Section 2 : Instruction to Bidder, Clause # 38.1 , Page 56  Within 15 calendar days of issue of work order from KSEBL, the successful bidder shall furnish to KSEBL, a Performance Security Deposit (PSD) as per the Sample form F of Section 4 in the form of a Bank Guarantee or DD for an amount equivalent to 5 (five) percent of the contract price. The performance Security shall be in the form of DD/BG from a Nationalized Bank or Scheduled Bank except Indus Ind Bank.	We understand that "Performance Security Deposit" as Security Deposit" which is 5% of contract price only and the same to be submitted by the successful bidder within 15 calendar days of issue of work order from KSEBL.  Further, the Performance Bank Guarantee of 10% of contract price shall be provided by the successful bidder before release of final payment with validity till the end of warranty period.  On submission of this PBG of 10% of the contract price following will be released:	The provisions of the document shall prevail.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
<b>No.</b>	Performance Bank Guarantee / Performance Security Deposit  As per specification, the performance Bank Guarantee equivalent to 10% of the contract value shall be provided by the bidder and maintained during the entire guarantee period i.e. 84 months	,	The provisions of the document shall prevail.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
21.	General	We need to do extensive exercise / preparation like survey, getting quotations from vendors considering guarantee period, commercial details etc. which requires some more time to prepare our tender proposal.  We, therefore, request you to extend the due date of submission of tender by at-least 30 days time and oblige.	The bid submission date is schedule on 12.10.2018 AT 11:00 hrs as per Amendment No. 6.
22.	Volume – II, Technical Specifications, Section 1, clause 2.12 Page 09  Access to the Line and Right of Way  KSEBL is utilizing the existing RoW as far as possible. Right of way and way leave clearance shall be arranged by the KSEBL in accordance with work schedule. KSEBL will secure way leave and Right of way in the Forest area. Access to the Line and the locations described in section 3, part A of this volume, and the directions may be strictly followed.	As per the clause, For new RoW, KSEBL will arrange for clearing the site suitable for carrying out the construction activity and shall pay compensation to the owners/tenants for crops, trees and houses during the project implementation within the way leaves (right-of-way) for both Tower location and Stringing corridor. Please confirm.	Provisions of the document are clear and shall prevail. Clearances (limited to the statutory clearance) in the RoW and clearances/crop/other damages in the tower footing area shall be to the account of KSEBL.
23.	Volume - II, Technical Specifications,	As per Section-1, Clause No. 4.1,	Please refer Climatic & Service

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Section 1, Clause 4.1(Table), Page No.12 4.1 Details of line Materials	Limiting condition to calculate the sag tension not mentioned in Electrical System Data for 220/110 kV lines.  We request you to provide ambient Conditions to calculate Current Carrying Capacity as well as Limiting condition to calculate Sag-Tension calculation	Conditions mentioned at Clause No. 4.2, Section-1, Volume-2 of bid document.
24.	Volume - II, Technical Specifications, Section 1, Clause 4.2 (Table), Page No.15  Climatic and Service Condition	As per IEEE 738 the value for wind velocity perpendicular to conductor axis will be taken as 0.56 meter/sec for ampacity calculation.	The bidder is required to follow KSEB standards given in the bid documents and relevant Indian Standards.
25.	Vol-II Section 3 - Site Access, CI 1, Page 26 WAY LEAVES	The necessary permission for the removal of obstructions such as trees, houses, etc. and for the permanent removal or guarding of pipes, telegraph, telephone and power lines will be in the responsibility of the Contractor. The KSEBL shall assist the Contractor in getting that permission, if	Provisions of the document are clear and shall prevail.

The	Clause No. and Existing provision	Clarification required	Clarifications
SI. No.			
		required for such works.	
		Kindly confirm the following:	
		1. Temporary removal of obstrctions	
		comes under the scope of the	
		contractor. But permanent removal	
		of obstructions is the responsibility	
		of the Board and the Board will	
		bear the cost. Contractor has to do	
		the necessary laisioning work.	
		2. Compensation for additional RoW	
		like, land, crop, etc. will be paid by	
		the Board.	
		3. For encroachment at tower	
		locations, KSEBL will clear the	
		site. Tree cutting compensation	
		will be paid by the Board. For	
		encroachment at tower locations,	
		KSEBL will clear the site. Tree	
		cutting compensation will be paid	
		by the Board.	
26.	Vol-II Section 3 - Site Access Page 26,	In cl. 6 Damage, We understand the	Compensation for RoW & Tower foot
	Clause 26	compensation for damage of crops,	compensations shall be to the account
		trees and houses falling under the	of KSEBL. Other damages/expenses on
		Tower locations and additional area	account of equipment/vehicle access to

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		near Tower locations shall be paid by KSEBL. Please confirm.	site, crop damage due to line stringing, other work etc. to be borne by the contractor.
27.	Volume – II, Technical Specifications, Section 3, Clause # 6, Pg.28  Damages	"The Contractor shall pay compensation to the owners/tenants for damages of crops, trees and houses during the project implementation within the way leaves (right-of-way) which are unavoidable for construction of the transmission line."  We understand that the Rights of way payment will be in client's scope and only damages to Crop, Trees and Houses which are during execution work will be in Contractors scope.  Land Compensation for Tower Footing and Right of Way Charges (if any) required to pay to land Owners will be	compensations to the account of KSEBL. Other damages/expenses on account of equipment/vehicle access to site, crop damage due to line stringing, other work etc. to be borne by the
28.	Vol-II, Technical Specification,	in KSEBL Scope.  Technical Details Of Conductor for	The technical details of ACCC Drake

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	SECTION – 5 (Technical Specifications of Conductors), Cl.No.4, Page-51  Technical details of conductors are mentioned in clause 4.1, Section 1, Part A of this volume.	ACCC CONDUCTOR. As per BOQ ACCC Drake requirement is mentioned as 138 km. But technical requirements such amapcity or sag tenison requirements was not mentioned. So kindly provide the technical requirements. Such as	conductor is attached at <b>Annex-1</b> .  The technical specifications of ACCC conductor is attached at <b>Annex-1</b> .
		<ol> <li>Ampacity A</li> <li>32 deg. C &amp; full wind condition kgf</li> <li>32 deg. C &amp; Nil wind condition %</li> <li>Minimum tempt. &amp; 36% of full wind condition kgf</li> <li>32 deg. C &amp; 75% of full wind condition kgf. if required.</li> </ol>	
29.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.5.1, Page-51  The material offered shall be of best quality and workmanship. The Aluminium conductor strands will consist outer	Please clarify that for ACSR Product/Type, the aluminium wire of EC Grade, as per the relevant IS: 5484 standard.	It is clarified that ACSR Product/Type, the aluminium wire of EC Grade, shall be as per the relevant IS:5484 standard.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	stranding of fully annealed aluminium wire of1350-O.		
30.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.5.2, Page-51  The steel wires for conductor shall be evenly and uniformly coated with Zn complying with ASTM B498/957.	The steel wires properties for conductor are as per the relevant IS:398 Part-2/IS: 4826/IS: 209 standard. Please confirm.	Confirmed
31.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.5.2, Page-51  The steel wires for conductor shall be evenly and uniformly coated with Zn complying with ASTM B498/957.	Kindly add: for Non metalic CFC Core it will comply the ASTM B987 Standard	Provisions of the document will prevail.
32.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.6.4.1, Page-52  The standard length of the conductor shall	We understand that in ACSR Panther, proposal of double length in single drum i.e Std. length 2000 Meter (+/-5 %) X 2 length. Please clarify.	Decision shall be given to successful bidder after submission of Drum Schedule.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	be 2000 meters. A tolerance of +/5% on the standard length offered by the Bidder shall be permitted.		
33.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.6.5, Page-52  TOLERANCES: Manufacturing tolerances on the dimensions to the extent of one per cent shall be permitted for individual strands and the complete conductor.	1. Add: For composite cores, the manufacturing tolerance shall be +/- 0.05 mm of the stated nominal value. (This change makes the requirement consistent with ASTM B987 section 12.3.)  2. Add: For Conductor Aluminium area, the manufacturing tolerance shall be +/- 2%.	Specifications for the ACCC conductors are is attached at <b>Annex-1</b> . Other provisions of the document shall prevail.
34.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.6.5, Page-52  TOLERANCES: Manufacturing tolerances on the dimensions to the extent of one per cent shall be permitted for individual strands and the complete conductor.	The dimensions and tolerance mentioned in GTP are as per the applicable/relevant IS:398 Part 2 & IS:398 Part-5 standards. Kindly confirm.	Acceptable as per IS.
35.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications	•	Type Test on ACSR conductor shall be as per relevant IS.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
36.	of Conductors), Cl.No.7, Page-52  TEST ON CONDUCTORS  Vol-II, Technical Specification,	specify the details of required type test needed particularly for ACSR Product.  Please add following request	Provisions of Tender Document shall
	SECTION - 5 (Technical Specifications of Conductors), Cl.No.7.1, Page-52  Type test  (i) On Complete Conductor  (ii) On Conductor Strand/ Core	also::Type tests specified under Clause 7.1 shall not be required to be carried out if a valid test certificate is available for the offered design, i.e., tests conducted earlier (within 05 years) should have been conducted in accredited laboratory (accredited based on ISO/IEC guide 25/17025 or EN 41001 by the National Accreditation body of the country where laboratory is located) or witnessed by the representative (s) or Utility or witnessed by personnel from an ISO/IEC 17025 Accredited Laboratory. The accreditation shall be by an	apply.
		agency that is certified to ISO/IEC 17011 with an ILAC-mutual recognition agreement.	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		In the case of composite core conductors, the tests specified under Clause "On Conductor Strand/core" shall be carried out before stranding on as-manufactured samples.	
37.	Vol-II, Technical Specification, SECTION – 5 (Technical Specifications of Conductors), Cl.No.8, Page-55  PACKING  Clause 8.1 The conductor shall be supplied in non-returnable, strong, wooden drums, provided with lagging of adequate strength  Clause 8.18 As an alternative to wooden drum Bidder may also supply the conductors in nonreturnable painted steel drums.	We request you to amend the proposal with Steel drum with flexi packing on returnable basis. As we are supplying steel drum on returnable basis in the ongoing project "ERANAD" KSEB.	Steel Drums on returnable basis is acceptable to KSEBL.  However, the responsibility of taking away of drums rests with bidder.
38.	Volume – II, Technical Specification of Conductors, Table, Schedule-1, S.no-7.15, Page No-63	Please Provide: The value of Specified conductor current / Ampacity required under ambient conditions of 50 deg C.	For the purpose of Schedule 1, The current may be taken as below for different conductors:

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Steady State Conductor Temperature at specified conductor current of A and under ambient conditions.		Wolf - 343 A Panther - 420 A Kundah - 726 A Zebra - 770 A Moose - 880 A
39.	Volume – II, Technical Specification of Conductors, ANNEXURE-5A, Clause 1.5, Page 74  Coefficient of linear expansion for core/core strands  The temperature and elongation on a sample shall be continuously measured and recorded at interval of approximately 15 degree C from 15 degree C to maximum continuous operating temperature corresponding to rated current as of specification by changing the temperature by suitable means. Coefficient of linear expansion shall be determined from the measured result.	Please modify as follows: Coefficient of linear expansion for core/core strands  The temperature and elongation on a sample shall be continuously measured and recorded at interval of approximately 15 degree C from laboratory ambient condition to maximum continuous operating temperature corresponding to rated current as of specification by changing the temperature by suitable means. Coefficient of linear expansion shall be determined from the measured result.	Provisions of Tender Document shall apply.
40.	Volume - II, Technical Specification of	As per IEC 62004 Standard the heat	Provisions of Tender Document shall

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Conductors, ANNEXURE-5A, Clause 1.8, Page – 75  Heat Resistance test on Aluminium Alloy wire (if Applicable)  Breaking load test as per clause 1.5 above shall be carried out before and after heating the sample in uniform heat furnace at 280 degC (+5/-3 degC) temperature for one hour. The breaking strength of the wire after heating shall not be less than the 90% of the breaking strength before heating.	resistance test is carried out for Zirconium based thermal and super thermal aluminium alloy grade. As we are providing the annealed 1350-O type aluminium wire and 1350 Hard Drawn aluminium wire the heat resistance test is not required.	apply.
41.	Volume – II, Technical Specification of Conductors, ANNEXURE-5A, Clause 1.9, Page – 75  Chemical Analysis of Aluminium Alloy and Core  Samples taken from the Aluminium and core coils/strands shall be chemically/spectrographically analyzed.	Kindly Remove chemical analysis requirement for composite core. Cannot perform a spectrographic analysis of the composite core. The glass transition test 1 should be done in place of the chemical analysis, in that the glass transition temperature will verify the composite is fully cured when it leaves the manufacturer.	conductor is attached at <b>Annex-1</b> .

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	The same shall be in conformity to the particulars guaranteed by the bidder so as to meet the requirements stated in this Specification.	Glass Transition Temperature Test (for polymer composite core only)  Test shall be conducted as per ASTM B987. The minimum glass transition temperature shall be either (i) the design maximum continuous operating temperature of the offered HTLS conductor + 35 deg C or (ii) minimum glass transition temperature as per ASTM B987 i.e.180 deg. C + 25 deg C; Whichever is lower.	
42.	Volume – II, Technical Specification of Conductors, ANNEXURE-5A, Clause 1.27, Page 78  Sheaves Test (if required) The conductor sample of minimum length of 35 meter shall be tensioned at 22 % of the UTS and shall be passed through pulleys having diameter of 32 times that of the conductor with angle of 20 deg. between the pulleys. The conductor shall be	Please change the procedure as follows: The conductor sample of minimum length of 35 meter shall be tested in accordance with IEC 60794-1-2, Section 20, Figure 26 (Procedure 4) with following details: Tension shall be 10% of the conductor UTS; pulley diameter shall be at least 35 times that of the conductor; angle between the pulleys shall be of 20 degress. The	

The SI.	Clause No. and Existing provision	Clarification required	Clarifications
SI. No.	passed over the pulleys 36 times a speed of 2 m/sec. After this test, UTS test on the conductor shall be carried out.	conductor shall be passed over the pulleys a minimum of 18 times at a speed of 0.2 to 0.5 m/sec. After this test, the UTS of aluminium, steel, or invar core materials shall be evaluated. In the case of polymer composite core conductors, the core shall be inspected for any sign of damage or cracking by subjecting the core to a dye penetration test per ASTM B987 section 14. Dye penetrant exposure	
43.	Volume – II, Section- 6, Technical	time shall be 30+1/-0 minutes. (The tension must be limited to 10% of UTS during this test (typical stringing tension) and the traditional test speed is 0.2 to 0.5 m/s. The soft aluminium used in Carbon Fibre Composite Core Conductor will deform under the specified tension levels.  Please provide the following details	Bidders may consider the following
10.	Specification of OPGW, Page 79	which will be helpful in designing of suitable OPGW :	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		1) Nominal span (mm) 2) Wind pressure(kg/m2) 3) Max. sag at 53°C- Nil wind condition or Initial sag at 0°C -Nil wind Condition 4) Max. tension at 32°C -full wind Condition	Nominal span is 335m     Please refer to Climatic conditions     Cl. 4.2, pg. 15
44.	Volume – II, Section- 8, Pg.184  Bolts or Rivets  4.8.3 Anchor shackle  Anchor shackle shall be made of forged steel complete with G.I. rivets and stainless-steel split pin, minimum breaking strength shall be 240KN for double tension string.	Please Clarify  Whether to use GI Rivets or Bolts as per Clause 4.8.3, 4.8.4 & 4.8.5 of hardware Fittings it is specified as GI Rivets.	
	4.8.4 Ball Clevis, Socket Clevis  The Ball clevis shall be made of forged steel and socket clevis from malleable cast iron complete with G.I. rivet and		

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	stainless-steel split pins. Ball and socket clevis shall be suitable for insulator string for appropriate fitting to which they are connected. All ball and clevis shall be a minimum breaking strength of 120KN.  4.8.5 Clevis – Clevis  Clevis fittings shall be made of malleable cast iron, complete with G.I. rivet and stainless-steel split pins. Clevis shall be suitable for connecting to yoke plate on sub-station structure side. Minimum breaking strength of the clevis shall be 120KN		
45.	Technical specification  Tower Locations	Request kindly clarify where will the Narrow based towers will be used in the Tower Schedule along with Locations?	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
46.	Technical Specification  UTS for Suspension & Tension for 220kV ACSR Single Panther	As per Specification UTS for Twin ACSR Panther is 90KN & 120KN for Suspension & tension respectively. Should we consider the same for 220kV Single ACSR Panther.  Please Clarify	For 110kV with Single ACSR Panther Conductor Single Suspension/ Tension Fitting will be suitable for 70kN and 90kN respectively & double Suspension/Tension fitting shall be suitable for minimum 140 kN & 180 kN respectively.  For 220kV with twin ACSR Panther conductor V-Suspension String (each arm) and Single Tension String shall be suitable for 90kN & 120kN Respectively and Double Tension Fitting shall be suitable for minimum 240 kN.
47.	Technical Specification  Specification & type test details for T- Connector, Spacer Damper & Rigid Spacer	Technical requirement & Type test details for T-Connector, Spacer Damper & Rigid Spacer is missing Please Provide	Shall be as per relevant IS suitable to the specified conductor. The bidder shall submit the drawings/GTP along with their bid.
48.	Technical Specification	We request you accept the PPC grade cement instead of OPC.	Provisions of Bid Document shall prevail.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	Cement Supply		
49.	Technical Specification Pile Design	We request you to share the Piling or special foundations designs to get the best quotations from the vendors.	Design shall be shared with the successful bidder.
50.	General Queries Survey Details	We request you to provide the KMZ file along with the Tower Schedules for all the Lines.	KML files for KLP, NSIP & TLP can be downloaded from PFCCL website <a href="www.pfcclindia.com">www.pfcclindia.com</a> under "Tenders". Tentative tower schedule is attached at <a href="Annex-2">Annex-2</a> and is uploaded at PFCCL website.
51.	General Queries  Specification for ERS Installations	As per labor Schedule Item 18 it is mentioned that the Installation of ERS will as per the scope and Technical Specification  We request you o share the complete scope of work along with the Technical Specification.	The scope includes picking up the ERS from KSEBL store, Installation of the same, and returning the same to the store after use.
52.	General Queries  ACCC Specification	We request you to share the Specification for ACCC Drake Conductor.	Please refer reply at Item No. 28

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
53.	Volume II/ Section-4, Clause 2.2.1 Page 34  2.2.1 This Specification covers proto fabrication, assembly and type testing of 220 kV narrow base MCMV tower as per Owner's design as indicated in the Bid Proposal Sheets (BPS) as described hereunder. The testing of the towers shall be carried out at Bidder's own test bed or a suitable test bed, where adequate facilities are available. The Owner shall provide designs of the towers required for carrying out type testing, to the successful Bidders within 15 days of placement of award and acceptance of award by the Bidder. The scope of this specification also provides for development of structural drawings and fabrication shop drawings, Bill of Materials including bolts/nuts and spring washers, section wise steel requirement chart, fabrication and supply of prototype tower and its assembly, inspection, transportation of	As per this clause it is mentioned as " This Specification covers proto fabrication, assembly and type testing of 220kV narrow base MCMV tower as per Owner's design as indicated in the Bid Proposal sheets (BPS) as described hereunder."  Kindly confirm whether this 220kV narrow base MCMV tower will be designed by the Owner and only testing & proto-fabrication alone to be carried out by the contractor?. Also if it is so, then in the Price schedule Sl.no.17.3 it is asking for the design & testing of 220kV Multi circuit special tower, whether this two clauses are different or same. Kindly clarify.  If new tower design to be carried out by contractor kindly clarify the following  (i) What are the type of towers to be designed?	It is clarified that 220kV narrow base MCMV tower will as per KSEBL's design. No type testing by the bidder is required on the tower design supplied by KSEBL.  However, designing of 220 kV Multi Circuit Special Tower is included in BoQ item and Price Schedule SI. No. 17.3, bidders are advised to quote for the same.  The towers shall be designed as per latest applicable relvent IS.  For 400kV quad Moose conductors and for 220kV twin Panther conductors will be used.  All other details shall be provided/finalised during execution.

The SI.	Clause No. and Existing provision	Clarification required	Clarifications
No.	prototype tower material to the test bed along with bolts/nuts & spring washer and necessary tower accessories required for tower testing, erection of the tower at the test bed and testing the same to the full design load and additional loads as specified for verification of overall capacity of the tower.	<ul> <li>(ii) What is the type of condutor to be used &amp; whether it is single or double?</li> <li>(iii) Whether the suspension towers are to be designed with V-String?</li> <li>(iv) What is the maximum base width for these towers?</li> <li>(v) Whether the towers are to be designed as per latest IS codes?</li> <li>(vi) Whether the towers are to be designed with single peak with OPGW?</li> </ul>	
54.	Volume II/ Section-4, Clause 2.2.5 Page 34  In addition to the above, Bidder shall design, Proto Fabrication, Assembly and Type Testing (non-destructive type) of a 400 kV Multi-circuit &/or Double Circuit tower with +9m body extension. The design carried out shall be the most optimum as per the best practices prevailing in the market. The design	As per this clause it is mentioned as " In addition to the above, Bidder shall design, Proto Fabrication, Assembly and Type Testing (non-destrcutive type) of a 400kV Multi-circuit & /or Double Circuit tower with +9m body extension".  Kindly confirm whether both 400kV Multi circuit & double circuit tower to be	accordingly.  Either 400Kv Multi-circuit or 400Kv Double circuit tower will be required.

The SI.	Clause No. and Existing provision	Clarification required	Clarifications
No.	calculations shall be submitted to KSEBL for their approval. All subsequent activities shall be governed by clauses stated above.	designed? If it is so, kindly clarify the following with respect to 400kV towers  (i) Whether four type of towers in 400kV Multi-circuit & double circuit to be designed?  (ii) Is there any base width restriction for these towers?  (iii) What are the design parameters for these towers? like design wind span, weight span etc.  (iv) Whether V-string is to be used for Suspension towers?  (v) Whether the designs are as per latest IS code or anything specifically to be considered for design?  (vi) Whether both double circuit & multi-circuit towers are to be designed for Quad ACSR Moose conductors?	
		(vii) Whether one GSW & one OPGW	

The SI.	Clause No. and Existing provision	Clarification required	Clarifications
No.		earth wire peak to be considered for these towers?	
55.	Sec-9, Part-I, Tower Foundation, CI 2.3 Page 205		Provisions of the document shall prevail.
	2.3. Item Description: Excavation in hard rock using non explosive agent (Chemical) without resorting to the use of conventional explosive materials etc. in all lifts and conveying and depositing the excavated rock etc. at places with in a distance of 50m including pumping out water from all sources wherever necessary.  This item is applicable for excavation works of any width or area where blasting is not possible by the conventional methods and breaking of rock to be resorted using chemical. The locations where chemical blasting is to be carried out will be as directed by the Engineer in charge and the decision of the Engineer in charge shall be final. The quantity under	In this connection, we would suggest that normal blasting OR any other method can also be allowed where rock is encountered. Blasting using non-explosive agents (Chemical blasting) will require more procedural activity and will increase the cost of work.	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
	removal by 'Chemical blasting' shall be restricted to the minimum as decided by the Engineer in charge.		
56.	Price Schedule Item # 1 Tower Materials	We request you to Bifurcate the Tower material BOQ in two different parts  1) Tower material including B/N, stubs and  2) All the accessories should be separate items for supply and erection  As the payment terms are linked to erection, Payment for Tower Material should be released on Erection of Towers and it should not be hold till erection of accessories. As the accessories will be installed after stringing of conductor payment for Tower Material will be on hold till that time. Hence we request you to bifurcate this item in Two parts.	prevail.

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
57.	Price Schedule : BOQ Labor  Excavation	We request you to add excavation in hard rock soil using explosive agent in case of remote or forest /Hilly area.	
58.	Price Schedule : BOQ Labor Concreting Method	We have studied the Labor BOQ, hence request you to make a provision of Machine batch and machine mix design M-20 grade cement concrete.  Adding this item in BOQ will help in using the Machines and will increaase the productivity in congested or inaccessible locations.	Schedule.
59.	Price Schedule : Material and Spares OPGW Joint Box	We request you to make a provision of three way Joint box for OPGW cable in case required in Substations end.	
60.	Price Schedule  110kV Underground Cable	We request you to clarify the following for the 110kV Underground Cabling work:  1. Scope of work not defined any where in Technical Specification	The technical specifications of 110 kV cable is attached at <b>Annex-3</b>

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		2. Request you to provide the Technical Specification for 110kV Underground Power Cable	
61.	General Query	We envisage that there is no provision for 220/110V Monopoles in the scope of work. Kindly confirm.	Confirmed.
62.	Price Schedule	We request you to provide price schedule in M S excel for submission.	The soft copy of BoQ and Price Schedule is being uploaded in MSTC and PFCCL website.
63.	Price Schedule/ Sl.No.17, Page 4 of 25 Sl.No.17.1,17.2 & 17.3	As per SI.No.17.1, 17.2 & 17.3 it is mentioned that " Design, Proto Fabrication, Assembly and Type Testing (non-destructive type) of new towers including design of tower foundation, completion in all respects as per scope & specification of work & technical specifications."	Please refer reply at Item No. 54
	Design, Proto Fabrication, Assembly and Type Testing (non-destructive type) of new towers including design of tower foundation, complete in all respects as per scope & specification of work & technical specifications.		
	400KV Multi Circuit tower 400KV Double Circuit tower		
	220 Multi Circuit special tower	Kindly confirm which type of tower to be designed for 400kV Multi circuit, 400kV Double Circuit & 220kV Multi	

The SI. No.	Clause No. and Existing provision	Clarification required	Clarifications
		circuit special tower? whether one tower in each to be designed or all four types of towers & its foundations are required in each item. Please confirm.	
64.	General	We request you to provide softcopy of the BOQ, to enable us to use the same for prepration of our Bid.	- · · · · · · · · · · · · · · · · · ·
65.	Annexure B of Volume II – BOQ		The revised BoQ is attached.
66.	Volume III - "Price Schedule"		The revised Price Schedule is attached.
67.	Pre-bid Meeting		A pre-bid meeting was held on 17.09.2018 to address the issues raised by the bidders.
			The Minutes of Pre-Bid Meeting is attached at <b>Annex-4</b> for information and reference of the bidders.