

**HSCC (India) Limited**  
**as Executing Agency on behalf of**  
**MINISTRY OF HEALTH & FAMILY WELFARE,**  
**Government of India, New Delhi**

Dated : 30.05.2018

**AMENDMENT No. – I**

**Project Name: Tender for “External Electrical Works for All India Institute of Medical Sciences (AIIMS) at Raebareli (U.P.)”**

**Tender No. HSCC/PMSSY/AIIMS/Raebareli/Ext-Elect/2019; dated: 06.05.2019**

**This has reference to subject work, the following Amendment may be noted, which shall be treated as a part of the contract to be uploaded along with tender/ bid:**

**(A) The Last date of submission & opening of bids has been extended as follows:**

**Last date to fill/upload the tender : upto 15:00 hrs. on 11.06.2017 through e-Tendering.**

**Date of Opening of bids : on 11.06.2017 at 15:30 hrs.**

**(B) Reply to Pre Bid Queries raised by bidders during pre -bid meeting held on 17.05.2019 at HSCC, Head Office, Noida**

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
1	TS - DG Set Works - Sl. No. 7.4.5 - Fuel System	The engine shall be capable of running on all types of diesel fuel oil normally available in India.	Cummins Engines are suitable to run on HSD fuel only confirming to IS: 1460. This is as per manufacturer standard only.	OK
2	TS - DG Set Works - Sl. No. 7.4.7 - Cooling	Diesel Engine shall be water cooled with Radiator heat exchanger system.	Diesel engine shall be Radiator cooled as per manufacturer standards.	OK
3	TS - DG Set Works - Sl. No. 7.4.10 - Quietness of Operation	The Noise Level for the set shall not exceed 115-120dba at one meter distance of the engine.	As per CPCB norms noise insertion loss shall be 25 dBA at one meter distance form DG set under free field condition for 1250 KVA DG Set & 75 dBA at one meter distance form DG set under free field condition for 250 KVA DG Set.	As per CPCB Norms.
4	TS - DG Set Works - Sl. No. 7.5.2 - Alternator	The alternator shall be SP-DP Enclosure , foot mounted with Ball and roller bearings on end shields.	The alternator is ball bearing type on end as per manufacturer standards.	OK
5	TS - DG Set Works - Sl. No. 7.5.8 - Accoustic Enclosure	Thickness of Acoustic Enclosure - Not Mentioned	As per manufacture standard acoustic enclosure shall be fabricated out of 1.6mm (16 SWG) thick CRCA sheet.	It should meet CPCB requirment.
6	TS - DG Set Works - AMF Panel Sl. No. 7.6.3	Voltmeter 144 sqmm with selector switches for alternator /Mains/Phases complete protection. Ammeter 144sqmm with C.T. & Selector Switch , KWH Meter , KW 144 Sqmm.	We have considered Voltmeter & Ammeter with 96 x 96 Sqmm as per manufacturer standards.	OK

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
7	TS - Capacitor Panel - Sl. No. 3.1.05	As per BOQ - Supply, Erection, Testing and Commissioning of 11 kV 2000 kVAR, 0.2% reactor, with 15% Over voltage 5 Steps APFC Panel As per Spwifications - APFC Panel shall be rated for 525V for 14% detuned reactor.	Please confirm we need to consider 11 KC Capacitor Panel as per BOQ.	Yes,As per BOQ
8	BOQ - SL. No. 1.03 - Transformers	BOQ - 11/0.433KV Transformer (Hospital) - On load tap changer on HV Side range -15%, 0, +5% in the steps of 2.5% per step . As per Specifications - The range for circuit taps which shall be provided on H.V. Side shall be plus 5% & minus 15% in steps of 1.25%	Request you to kindly clarify which one to consider.	-15% to +5% in step of 1.25%
9	TS - 11KV Transformers - Item No. 2.01	Transformer Specs asks for "The Transformer loss will be as per IS 1180 Amended upto date"	IS 1180 specifies Transformer losses as Level 1 / Level 2 / Level 3. Please clarify which we have to consider.	Losses as per IS 1180 level-3
10	TS - 11KV Transformers - Item No. 2.0	Transformer BOQ asks for "complete including Foundation" however under Transformer Technical Specs - Clause 2.0 - General - mentions that "Major Civil Work such as foundations, trenches etc, will be paid as per civil works". Both the statements are contradictory to each other.	Please clarify whether the Foundation of Transformer is in our scope of work or to be provided by Civil Contractor.	As per BOQ foundation in bidder scope
11	BOQ - Item No. 6.01 - 160KVA UPS	Supply, Installation, Testing and Commissioning of micro processor based 2 x 160 KVA. UPS operating in parallel redundant load sharing mode (N+1) configuration	Request you to kindly confirm which option to consider <b>Option 1</b> - 160KVA X 2 Nos. in parallel working x 2 Sets = 4 Nos UPS. <b>Option 2</b> - 160KVA X 4 Nos, All UPS working in parallel. <b>Option 3</b> - 160 KVA x 2 Nos in parallel working.	160KVAX 2 nos. working in parallel redundant load sharing mode of each set as per BOQ
12	TS - UPS - Sl. No. 14.10 - A10	Each UPS should be offered with Output Isolation Transformer , External to UPS.	We request you to kindly consider UPS with both options External as well as Inbuilt isolation transformer.	OK
13	BOQ - Item no. 8 - LT Cables	BOQ specifes - Supply of following sizes of 1.1 kV grade multicore aluminium conductor PVC sheathed armoured XLPE cable as per IS 7098. As per Specifications - The L.T. power cable shall be XLPE Cable PVC insulated PVC sheathed type aluminium conductor armoured cable and L.T. control cable shall be PVC insulated PVC sheathed type copper conductor unarmoured cable conforming to IS: 7098: 1988 (Part-I) with up to date amendments	Please clarify whether we need to consider XLPE Insulated or PVC Insulated Cables. We understand it should be XLPE Insulated as per BOQ.	As per BOQ
14	Drawings	Drawings	Request you to kindly provide SLD and Equipment Layout for the project.	SLD will be provided to successful bidder
15	BOQ - Sub Head 11	Boom Barrier System - Supply, Installation , Testing and Commissioning of High Speed Microprocessor based with activation system comprising Electro-Mechanical pump unit , balancing by compression spring , internal stops adjustable for open or close beam positions . the barrier for continuous use for vehicular span of up to 6 mtrs, includes Boom with controller & accessories , 100% duty cycle. with complete as required.	Please clarify whether we need to consider Hydraulic pump unit OR Electro-Mechanical pump set, Since Sr. no. 6 - defines accorries pertaining to Hydraulic unit. Even the Span is also 5 meters with Hydraulic. Please clarify the specs to be considered.	Boom Barrier System will be Electro-Mechanical Type
16	Vol IV - Tech Specs -List of Approved Makes	List of Makes for AV System	Makes are not specified for AV system, request you to please specify.	AV System: Bosch/JVL/EV Projector : Sony/Barco/christie
17	Vol IV - Tech Specs -List of Approved Makes, Page 88 of 92	LIST OF APPROVED MAKES FOR ELCTRICAL SYSTEM - HSCC electrical engineer (approving authority) reserves the right to opt for the best preferred listed make.	We confirm to provide one of the approved makes as per tender, however final choice of make shall remain with us. We also confirm that we shall submit the technical details to you before ordering major items.	As per Tender

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18	Vol IV - Tech Specs -List of Approved Makes, Page 88 of 92	Makes of Transformers : ABB/GE prolac / Schneider/Alstom - As ABB is not manufacturing ONAN Transformers and GE and ALSTOM are merged hence we are left with two makes only.	We request you to add makes of Voltamp and Kirloskar in your approved list.	No change
19	Vol IV - Tech Specs -List of Approved Makes	List of Makes for Steel Tubular Poles	Makes are not specified for Steel Tubular Poles, request you to please specify.	Fabricated as per IS code
20	Vol IV - Tech Specs -List of Approved Makes	Sr. No. 6 -Diesel Engine Makes	We request that we can consider any Authorized System Integrator dealing with Perkins Engine and not only Sterling as mentioned in your make list.	No change
21	Vol IV - Tech Specs -List of Approved Makes, Page 88 of 92	Make of APFC Panel - EPCOS , Ducati	We request you to accept the makes specified in MV Panels to be considered for APFC Panels	No change
22	Vol IV - Tech Specs -List of Approved Makes, Page 90 of 92	Make of HT/LT- XLPE cables - CCI / Universal / Finolex / Rallison	We request you to accept the make of KEI / Polycab in your approved make list for HT & LT Cables.	No change
23	Vol IV - Tech Specs -List of Approved Makes, Page 90 of 92	Make of Copper Control cable - CCI / Universal / Finolex / Rallison	We request you to accept the make of KEI / Polycab in your approved make list for Copper Control Cable.	No change
24	Vol IV - Tech Specs -List of Approved Makes, Page 88 of 92	11 KV VCB Panel Board/ RMU - Siemens/L&T/ABB/Schneider	Please confirm whether we can consider System Houses of the approved VCB manufacturers.	No change
25	Vol 1 NIT & PQ - Clause 2.3.7 - Page 22 of 55.	The financial package (VOLUME V - BILL OF QUANTITY/ PRICE BID) should be submitted ONLINE only. These item rate/prices should include all costs associated with the Project including any out of pocket / mobilization expenses, taxes, charges, levies, cess, GST, VAT, Service Tax etc., excluding PF & ESI as per GCC, applicable till the date of submission of bids or any extension thereof.	Please confirm whether Labour Cess needs to be included in our Prices or not.	Shall be as per tender condition.
26	Vol 1 NIT & PQ - Clause 2.3.7 - Page 22 of 55.	The financial package (VOLUME V - BILL OF QUANTITY/ PRICE BID) should be submitted ONLINE only. These item rate/prices should include all costs associated with the Project including any out of pocket / mobilization expenses, taxes, charges, levies, cess, GST, VAT, Service Tax etc., excluding PF & ESI as per GCC, applicable till the date of submission of bids or any extension thereof.	Please confirm the GST % to be considered for the Tender. We understand it should be 12%.	Shall be as per prevailing Govt. Laws/ rules & guidelines.
27	Vol I - Page 29 of 55 - Clause 5	<b>Approvals Required</b> - The Contractor shall obtain all necessary approvals Electric Supply and inspectorate. Agencies concerned, such as, but not limited to, Police and Security Agencies, in accordance prevailing rules, Building Bye-Laws etc., as the case may be with related to/ required for Construction/Completion. All expenditure on this account will be borne by the contractor. The approvals shall include any other approval which may be required for the project	Please confirm whether CEIG Approval is in the scope of the contractor or not? Or only Technical Documentation needs to be furnished for the same.	Shall be as per tender condition.

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28	Vol I - Page 29 of 55 - Clause 5	<b>Approvals Required</b> - The Contractor shall obtain all necessary approvals Electric Supply and inspectorate. Agencies concerned, such as, but not limited to, Police and Security Agencies, in accordance prevailing rules, Building Bye-Laws etc., as the case may be with related to/ required for Construction/Completion. All expenditure on this account will be borne by the contractor. The approvals shall include any other approval which may be required for the project	Please confirm that Load Sanctioning work is not in our scope of work.	Shall be as per tender condition.
29	Vol I - (NIT/PQ) - Cl.No. 1.25 & 1.26	Undertaking - Form H	Please confirm for which Items, we need to furnish this Undertaking.	<b>Shall be read as under:</b> 1.25. The contractor may entrust specialized items of works like Audio Visual System, Solar Photovoltaic Power Generation & Boom Barrier System works etc. to the agencies specialized in the specific trade 1.26. The Bidder must associate with himself agencies otherwise eligible to tender for Audio Visual System, Solar Photovoltaic Power Generation & Boom Barrier System works for which an <u>affidavit/undertaking as per revised/Amended format enclosed at Amended Form H should be submitted along with the Technical Bid.</u>
30	Vol 2 - GCC - Clause 1A - Page 15 of 123	Security Deposit - 2.5% of the contract value to be deducted from each RA bills.	We are not able to understand the details of this clause that how and when Security Deposit will be returned / reimbursed. We request you to clarify this. Moreover we request you to consider our request that we shall submit you an upfront BG of 2.5% of the C.V , so that there shall be No deductions from our RA bills on account of Security deposit.	Shall be as per tender condition.
31	Vol 2 - GCC - Clause 2 - Page 16 of 123	LD @ 1 % of tendered value per month of delay to be computed on per day basis, Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given.	We request you to consider the LD Clause limiting to maximum 5% of the contract value in-place of 10%.	Shall be as per tender condition.
32	Vol 2 GCC - Page 111 of 123	Clause 10 CC is Not Applicable since completion period is less than 12 months	We request that for any delay not attributable to the Contractor, we request for Escalation to be payable after the contractual completion period as per CPWD norms.	Shall be as per tender condition.
33	Vol 2 - GCC - Clause -38 - Page 38 of 47	Provided further that such increase including GST shall not be made in the extended period of contract for which the contractor alone is responsible for delay as determined by authority for extension of time under Clause 5 of Schedule F.	We request that Statutory Variation shall be payable in the extended period of contract as well.	Shall be as per tender condition.

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
34	Vol 2 GCC Section - 2 Clause 19C - Page 52 of 123	In case the contractor fails to make arrangement and provide necessary facilities as per tender, he shall be liable to pay a penalty of Rs.200/- for each default and in addition, the Engineer-in- Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.	We request you to wave -off this clause please.	Shall be as per tender condition.
35	Vol 2 GCC - Page 110 of 123	Amount shall be with-held @ 1%-2% of the C.V in case of failure to achieve Milestones specified.	We request you to wave-off the Milestone LD , since Project LD clause is already there in the Tender for any delay in work.	Shall be as per tender condition.
36	Vol 2 GCC Section - 2 Clause 25 - Page 59 of 123	The Director (E), HSCC India Ltd. shall in such case appoint the sole arbitrator or one of the three arbitrators as the case may be within 30 days of receipt of such a request and refer such disputes to arbitration.	We request that Arbitration shall be done with panel of 3 Arbitrators only. We request you to remove the Option of Sole Arbitrator please.	Shall be as per tender condition.
37	Vol 2 GCC - Page 112 of 123	Recovery shall also be made as specified, In case of Non-Deployment of desired Manpower.	We request you to wave-off the Penalty on Manpower deployment , since Project LD clause is already there in the Tender for any delay in work.	Shall be as per tender condition.
38	Vol 3 , SCC Clause 22 - Page 24 of 47	Insurance of Works & Contractor equipment, CAR, WC, Third party Insurance etc.	We have taken the Open master EAR insurance policy for all our projects across India, which cover third party liability. We will provide the insurance certificate to the customer. The Job insurance shall be covered in the Open Policy.	Shall be as per tender condition.
39	Vol 3 , SCC Clause 24 - Page 45 of 47	Only for Items of Major Electrical Equipments a. 70% of BOQ rate on receipt of equipment against receipt of complete material at site & test certificates. b. 15% of BOQ rate on erection and installation of equipment. c. 10% after successful completion of all works including all testing, commissioning & taking over. d. 5% after taking over of all works.	We request you to confirm that the mentioned Terms of Payment are for <b>All Items</b> in-place of Major Electrical Equipments.	Shall be as per tender condition.
40	Vol 3 , SCC Clause 24 - Page 45 of 47	Only for Items of Major Electrical Equipments a. 70% of BOQ rate on receipt of equipment against receipt of complete material at site & test certificates. b. 15% of BOQ rate on erection and installation of equipment. c. 10% after successful completion of all works including all testing, commissioning & taking over. d. 5% after taking over of all works.	We request you to make the Terms of payments for all items as :- a. 80% of BOQ rate on receipt of equipment against receipt of complete material at site & test certificates - on pro-rata basis. b. 10% of BOQ rate on erection and installation of equipment and materials - on pro-rata basis. c. 5% after successful completion of all works including all testing, commissioning & taking over. d. 5% after taking over of all works.	Shall be as per tender condition.
41	Vol 3 - SCC - Clause -32.5 Page 37 of 47	The Contractor shall make his own arrangement for water supply at Site for drinking as well as construction purposes at his own cost. The Contractor shall also make his own arrangements for power supply at Site for construction, testing & commissioning of all services and general use at his own cost.	We request you to provide Power & Water at one point for Construction purpose on chargeable basis. Further distribution shall be taken care by us.	No change, Shall be as per tender condition.
42	Vol 3 - SCC - Clause -32.5 Page 37 of 47	The Contractor shall make his own arrangement for water supply at Site for drinking as well as construction purposes at his own cost. The Contractor shall also make his own arrangements for power supply at Site for construction, testing & commissioning of all services and general use at his own cost.	Power & Water for Testing & Commissioning shall be given by HSCC free of cost.	Shall be as per tender condition.

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43	Vol 3 - SCC - Clause - 22.1.10 - Page 27 of 47	Cross Liabilities - The insurance policy shall include a cross liability clause such that the insurance shall apply to the Contractor and to the Employer as separate insured	Insurance Policy shall not apply to the Employer, please confirm.	Shall be as per tender condition.
44	Vol 3 - SCC - Clause -19 b Page 23 of 47	Uncovering and making openings - The contractor shall uncover any part or parts of the works or make openings in or through the same as the Executing Agency may from time to time direct and shall reinstate to make good such part or parts to the satisfaction of the Executing Agency. No extra payment will be paid for this.	We request that this work shall be Excluded from our scope of work, it should be in Civil vendor scope.	Shall be as per tender condition.
45	Vol 3 - SCC - Clause -20 c Page 23 of 47	Orders for variation to be in writing - The contractor shall make no such variations without an order in writing by the Executing Agency, provided that no order in writing shall be required for increase up to 30% or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this Clause, but is the result of the quantities exceeding or being less than those stated in the schedule of items.	Please confirm that we shall undertake any additional quantity work with some written instructions in the form of letter / order from HSCC. No additional work with verbal instructions shall be done by us.	Shall be as per tender condition.
46	Vol 3 - SCC - Clause -d - Page 16 of 47	Initial and Final Clearance of site for temporary works - The Contractor shall be responsible for the clearance of the site of all scrub, debris, rubbish, etc. to be removed off site to a location to be provided by the contractor and approved by the Engineer-in-charge. However, no tress shall be removed without the prior permission of the Engineer-in-charge. The structures, services and works required to be demolished and removed shall also be removed off site to a location as mentioned above. The Contractor shall obtain necessary permissions and approvals from the local authorities for such disposals. The demolition shall include digging, excavating and removal of substructures, foundations and buried works. The cost of all this shall be borne by the Contractor	Please confirm that Any Initial Clearance of site for temporary works shall be in our scope of work.	Shall be as per tender condition.
47	Vol 3 - SCC - Clause -38 - Page 38 of 47	Separate bank Account - The contractor shall open a bank account specifically for this contract. The mobilization advance given to the contractor shall be deposited in this account only. The details of this account shall be made available to the Executing agency. The contractor shall draw from this account the expenses for the purpose of procurement of materials, machineries, tools & plants and shuttering required for the said work only	We request you to wave off this clause, since we do not maintain any seperate Bank account for any project.	Shall be as per tender condition.
48	VOLUME – IV ,1.5.1 Page E-7 R0	The main bus-bars shall be of electrolytic copper/Al, with tubular design for uniform field gradient.	Cu as per Specified in BOQ. rectangular cross section construction is there as per Manufacturer. Please clarify the same.	As per BOQ
49	VOLUME – IV 1.6.3 Page E	It is preferable to have interrupters with encapsulation by solid insulation. Inte	The vacuum assembly may be made from <b>ceramic, silicone</b> , and the rigid encapsulation may be <b>epoxy</b> . Please clarify the material of Insulation.	As per BOQ
50	BOQ 1.06 BOQ-E 6_R0	33 kV/11kV, 10 MVA POWERTRANSFORMER.	Please specify permissible Losses for Power transformer. Please Provide the details specification for 10 MVA POWER-TRANSFORMER	As per IS/ECBC Amended upto date

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51	BOQ 1.06 BOQ-E 6_RO	33 kV/11kV, 10 MVA POWER TRANSFORMER.	Please Provide the details specification for 10 MVA POWER-TRANSFORMER	As per IS 2026 Amended upto date
52	BOQ 1.07 BOQ-E 7_RO	11 kV/.433kV -2500 KVA Distribution TRANSFORMER	Please specify permissible Losses for Distribution transformer.	As per IS 1180 Level-3
53	VOLUME – IV Page E-17 RO	Short circuit test results for similar transformers shall be furnished.	Short circuit test results for similar or Higher rating transformers to be consider	As per tender
54		General Civil Work	Please clarify whether the Civil Work as per below is to be considered in scope or not Fire Wall Rail Cum Road SOAK PIT OIL SOAK PIT FENCING METAL SPREDING LAND DEVELOPMENT ETC. CONTROL ROOM BUILDING	As per BOQ/tender
55		Civil Work- 2.5 MVA Distribution Transformer	Please clarify whether the Civil Work as per below is to be considered in scope or not SOAK PIT OIL SOAK PIT FENCING METAL SPREDING LAND DEVELOPMENT ETC.	As per BOQ/tender
56		Civil Work- 1250 KVA & 250 KVA	Please clarify whether the Civil Work as per below is to be considered in scope or FENCING METAL SPREDING LAND DEVELOPMENT ETC.	As per BOQ/tender
57	BOQ 12.05 BOQ-E 38_RO	HIGH MAST LIGHT Shall Be with Civil Foundation as per BOQ.	Civil foundation shall be paid extra or it shall be the part of High mast erection. please clarify on the same	As per BOQ
58			ON-BOARD SERVICE ENGINEERS & Man power of BBL to be depute for Maintenance activity During Defect Liability Period. please clarify on the same	As per BOQ
59			DEFINE PREVENTIVE CHECKS & OCASSIONS for Maintenance activity During Defect Liability Period. please clarify on the same	As per operation & maintenance manual of OEM
60	Power Transformer	ABB/GE prolac/ Schneider/Alstom	Bharat Bijlee LTD	No Change
61	Distribution Transformer	ABB/GE prolac/ Schneider/Alstom	CGL, Rakesh Transformer Telawane, Raychem,	No Change
62	Additional make for APFC Panel/ AHF	EPCOS, Ducati	Universal , Shreem	No Change
63	Automatic Battery Charger	Max Power/Amara raja Batteries ltd./Chhabi Electrical/Statcon power control ltd.	Panva Engg.	No Change
64	Battery	Panasonic/Hitachi/Cummins/Exide/ Amar Raja	LUMINOUS	No Change
65	HT/LT- XLPE cables	CCI/Universal/Finolex/Rallison	Polycab/ KEC / KEI/ Gemscab/ Ravin	No Change
66	Copper Control cable	CCI/Universal/Finolex/Rallison	Polycab/ KEC / KEI/ Gemscab/ Ravin	No Change
67	Cable tray	OBO/ Legrand/ Cooper/BEC/MEM	Indmark/ Universal/ BBL Approved Vendors	No Change
68	LED light fitting & Fixture	Philips / GE / Crompton Greaves	Bajaj / wipro	No Change
69	Chemical Earthing	OBO Bettermann / Erico/Furse / Ingesco/	Dockson power	No Change
70	PA system		PHILIPS, Ahuja	No Change
71	1.3.4-HT Panel	IAC	We propose ,Interlan Arc test will be 25kA for 0.1 sec,please accept.	As per BOQ/tender

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72	1.4.2-HT Panel	Degree of protection	Offered panels are type tested for IP-4x as per IEC 62271-200. Offered panels may not be totally enclosed, dust-tight, damp proof and vermin proof.	As per BOQ/tender
73	1.4.3-HT Panel	Sheet Metal	Sheet Metal will be CRCA	As per BOQ/tender
74	1.4.3-HT Panel	Power Cable Termination	We have not considered power cables, cable glands, cable supports, cable lugs, termination kits, sealing material for cable entry, etc in our scope. We shall only provide cable termination facility in offered panels. Note: Offered panel is suitable for direct cable termination. So, cable support is not required.	As per BOQ/tender
75	1.4.5-HT Panel	CT-PT Mounting in 33kV Panels	CTs will be mounted in cable chamber. These will be fixed and not on a roller Line PT shall be fixed type in the rear box with access from the rear of panel.	As per BOQ/tender and standard practice of OEM
76	1.4.7-HT Panel	Number of Cable Runs	We shall offer the panels suitable for terminating 2R x 3C x 400 sq.mm. Cable. Depth of the panels will be confirmed during detail Engineering. However, in case of panels with Line PTs, rear box of ~ 700mm will be present	As per BOQ/tender
77	1.4.7-HT Panel	Option for Motorised Rack in Rack Out	Feature of Motorised Rack in Rack Out cannot be provided.	As per BOQ/tender
78	1.4.10-HT Panel	Earth Switch shall be provided	We propose to provide 1x Cable Earthing truck and 1x Bus Earthing Truck per Switchboard, please accept the same.	OK
79	1.4.12-HT Panel	Sheet Metal and Painting Procedure	Sheet Metal will be CRCA. Painting procedure will be as enclosed with the Offer	As per BOQ
80	1.4.13-HT Panel	HT Door	HT Door for 33kV Panels will be bolted along with Latch Type handle. HT Door for 11kV Panels will be with latch type handle.	As per standard practice of OEM
81	1.5.1-HT Panel	Busbars	Busbars will be of Copper as requested in BOQ	As per BOQ
82	1.8-HT Panel	Earthing Switch or Earthing Truck	We shall provide 1x Cable Earthing truck and 1x Bus Earthing Truck per Switchboard	OK
83	1.9-HT Panel	Type Test	We shall submit following type test reports for offered panels during detailed engineering. We have not considered any fresh type test in our scope: 1. Dry Power Frequency Withstand & Lightning Impulse Withstand 2. Short Time Withstand & Peak Withstand Current 3. Short Circuit Test Duties 4. Degree of Protection 5. Internal Arc Test 6. Temperature Rise Test We have not considered any Fresh Type Test in our scope.	As per tender
84	2.1-HT Panel	IEC Standard for 11kV VCB	IEC 62271-100	As per IEC



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85	2.2.1-HT Panel	Degree of protection	Offered panels are type tested for IP-4x as per IEC 62271-200. Offered panels may not be totally enclosed, dust-tight, damp proof and vermin proof.	As per BOQ/tender
86	2.2.2, 2.2.3-HT Panel	33kV and 11kV VCB	VCB for 33kV Panels will be Truck Mounted. Poles will be encapsulated. VCB for 11kV Panels will be Cassette Mounted. Poles will be enclosed.	As per BOQ/tender
87	2.2.5-HT Panel	Painting	Painting will be as per enclosed Painting Procedure.	As per BOQ/tender
88	2.2.6-HT Panel	Sheet Metal Thickness	Offered panels are type tested with following design: For 11kV NXAir: Frame - 2.0 mm, High Voltage Door - 2.5 mm, Low Voltage Door - 2.0 mm, Pressure Relief Flaps - 1.0 mm, Partitions between compartments - 2.0 mm, Shutters - 1.0 mm, Partitions between panels - 2.0 mm, Bottom Plate - 2.0 mm, Rear Side Covers - 2.0 mm, End Covers - 2.0 mm. For 33kV 8BK80: Frame - 2.0 mm, High Voltage Door - 2.0 mm, Low Voltage Door - 2.5 mm, Pressure Relief Flaps - 1.0 mm, Partitions between compartments - 2.0 mm, Shutters - 1.0 mm, Partitions between panels - 2.0 mm, Bottom Plate - 2.0 mm, Rear Side Covers - 2.0 mm, End Covers - 2.0 mm.	As per standard design of OEM
89	2.2.7-HT Panel	CT-PT Mounting in 11kV Panels	CTs will be mounted in Cable Chamber / Rear Box. Line PT will be mounted in dedicated PT Chamber in Incomer. BPT if applicable will be provided in BUS PT Panel. Specification of CT and PT will be as per best technical solution received from CT-PT Manufacturer	As per standard practice of OEM. PT in outgoing of HT panel either not required.
90	2.2.8-HT Panel	Upper and Lower Contact Arms of VCB	Will be offered as per our Type Tested Design.	As per tender
91	2.2.12-HT Panel	Sleeving on Busbars of 11kV Switchboard and Temperature Rise Limit	Sleeving on Busbars of 11kV Switchboard will be provided using GFK Tubes. End Temperature will be as per IEC.	As per IEC
92	2.3.3-HT Panel	Busbar Support Insulators for 11kV Panels	As per the standard design of 11kV Panels, Main Busbars are self supporting.	As per standard design of OEM
93	2.3.4-HT Panel	Size of Earth Busbar	Size of Earth Busbar will be confirmed during detail Engg.	As per tender
94	2.3.5-HT Panel	CT-PT	Specification of CT and PT will be as per best technical solution received from CT-PT Manufacturer	As per tender
95	General Notes-HT Panel	Safety shutters	Offered panels have PM class partitions, hence, automatic safety shutters are metal.	As per tender
96	General Notes-HT Panel	Earthing switch for busbar and feeder	We are offering fault withstanding non-make proof type earthing truck (1 set each for busbar and cable earthing). Earthing switches are not offered.	As per tender
97	General Notes-HT Panel	Earthing truck interlock	We are offering earthing trucks with PT and annunciation device to prevent earthing of any live parts.	OK
98	General Notes-HT Panel	Anti-Pumping Relay	Anti-pumping is an in-built feature of offered VCBs, hence separate relay is not offered.	OK
99	General Notes-HT Panel	Trip-Circuit Supervision Relay	Trip-circuit supervision is an in-built feature of numerical relay, hence separate relay is not required.	OK

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
100	General Notes-HT Panel	Type test reports	We shall submit following type test reports for offered panels during detailed engineering. We have not considered any fresh type test in our scope: 1. Dry Power Frequency Withstand & Lightning Impulse Withstand 2. Short Time Withstand & Peak Withstand Current 3. Short Circuit Test Duties 4. Degree of Protection 5. Internal Arc Test 6. Temperature Rise Test We have not considered any fresh type testing in our scope.	As per tender
101	General Notes-HT Panel	LV components height	For 11kV NXAir panels: LV compartment height upto 2300mm. For 33kV NXAir panels: LV compartment height upto 2500mm.	As per relevant IS Code/CPWD specifications
102	General Notes-HT Panel	VCB Type	For 11kV NXAir panels: Offered panels have cassette mounted VCBs. For 33kV 8BK80 panels: Offered panels have floor mounted truck type VCBs.	As per BOQ
103	General Notes-HT Panel	VCB positions	Offered panels have two distinct positions for VCBs: Service and Test. The Isolated position is when VCB is drawn out of panel. Service and Test positions are inside panel with VCB door closed.	As per standard practice of OEM
104	General Notes-HT Panel	Maximum Relative Humidity	Offered panels are suitable for indoor operation only as per the following conditions mentioned in IEC 62271-1: Average maximum relative humidity measured over 24 hours <=95% Average maximum relative humidity measured over 1 month <=90%	As per tender
105	General Notes-HT Panel	Inspection and Testing	Inspection and Testing shall be as per attached FAT. Only fully assembled switchboard shall be offered for inspection of routine tests. We shall submit test certificates of bought out items and no separate tests shall be conducted on these equipments at our works. Inspection shall be carried out as per our standard quality assurance plan(attached for your ref). Any type test is not considered in our scope. However, we shall submit type test reports for type tests carried out on similar product. Any stage inspection is not envisaged. We have not considered any tests at site.	As per tender
106	General Notes-HT Panel	Segregated compartments	For 6.6kV NXAir panels: Offered panels shall have segregated compartments for VCB, main busbars, Cable chamber, LV compartments and bus / line PT. For 33kV 8BK80 panels: Offered panels shall have segregated compartments for VCB, main busbars, cable chamber, LV compartments and bus PT. Line PT is fixed type PT located in cable chamber.	As per standard practice of OEM

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
107	General Notes-HT Panel	Sheet metal thickness	Offered panels are type tested with following design: For 6.6kV NXAir: Frame - 2.0 mm, High Voltage Door - 2.5 mm, Low Voltage Door - 2.0 mm, Pressure Relief Flaps - 1.0 mm, Partitions between compartments - 2.0 mm, Shutters - 1.0 mm, Partitions between panels - 2.0 mm, Bottom Plate - 2.0 mm, Rear Side Covers - 2.0 mm, End Covers - 2.0 mm. Structure shall be of bolted type. For 33kV 8BK80: Frame - 2.0 mm, High Voltage Door - 2.0 mm, Low Voltage Door - 2.5 mm, Pressure Relief Flaps - 1.0 mm, Partitions between compartments - 2.0 mm, Shutters - 1.0 mm, Partitions between panels - 2.0 mm, Bottom Plate - 2.0 mm, Rear Side Covers - 2.0 mm, End	As per tender
108	General Notes-HT Panel	Temperature rise	Temperature rise shall be as per Table 3 of IEC 62271-1	As per IEC
109	General Notes-HT Panel	Degree of protection	Offered panels are type tested for IP-4x as per IEC 62271-200. Offered panels may not be totally enclosed, dust-tight, damp proof and vermin proof.	As per IEC
110	General Notes-HT Panel	Coil operating voltage	Permissible operating voltage for closing and tripping coils are as follows: Closing Coil - 85-110% Trip Coil - 70-110%	As per standard practice of OEM
111	General Notes-HT Panel	CT / PT burdens and PS class CT details	Exact suitable CT / PT burdens and PS class CT details shall be informed during detailed engineering subject to manufacturers' confirmation.	As per BOQ/tender
112	General Notes-HT Panel	Withdrawable PT	Bus PT shall be withdrawable type. In case of line PT: For NXAir panels: Line PT shall be withdrawable type in its own segregated compartment below the VCB with access from front of panel. For 33kV 8BK80 panels: Line PT shall be fixed type in the cable chamber with access from the rear of panel.	As per BOQ/tender
113	General Notes-HT Panel	Communication protocol of numerical relays	Communication protocol shall be IEC 60870-5-103 with RS485 port as stated in 44 P55400-022-JE.02A-0016 clause 4.20, page 7 of 11. Request you to confirm the same.	As per tender
114	General Notes-HT Panel	Earthing switch / isolating switch related interlocks	We have not considered any earthing switch / isolating switch in our scope, hence, these interlocks are not applicable.	As per tender
115	General Notes-HT Panel	Painting	Painting shall be as per standard painting procedure. For 11kV NXAir panels: RAL 7035 For 33kV 8BK80 panels: RAL 7032	As per tender
116	General Notes-HT Panel	Earth busbar	Earth busbar material shall be bare aluminum. Offered panels are type tested with the same. Suitable earth busbar sizes shall be informed during detailed engineering.	As per tender
117	BOQ Vol 05 Sr. No. 2.03	ACTIVE HARMONIC FILTER (AHF)	As per Manufacturer Standard, may it be considered single unit of 300A x 1 No. AHF instead of (60x5). Kindly Confirm	No change. As per BOQ

Sr. No.	Cl.No. / Vol./ Docs. Ref.	Tender Ref./ Description	Bidders Queries	HSCC Reply
118	BOQ Vol 05 Sr. No. 2.03	1 set of Multifunction meter display Current, Power factor and Voltage with RS 485 Port	Manufacturer is considering AHF with HMI thus having multiple reading parameters in the same, so no need of any external meter for AHF panel. Please confirm	As per BOQ
119	BOQ Vol 05 S r. No. 6.01	UPS System	As per Technical Specification of UPS Systems have upto 94% Efficiency, but in BOQ mentions 96%. Generally all UPS Systems have upto 94% Efficiency. Please confirm acceptance to 94% also.	As per BOQ
120	A Technical Specifications	Outdoor PA System	Technical Specification is not available in the tender documents. Request you to kindly provide the same	As per BOQ
121	A Technical Specifications	Audio Video System	Technical Specification is not available in the tender documents. Request you to kindly provide the same	As per BOQ
122	A Technical Specifications	Boom Barrier	Technical Specification is not available in the tender documents. Request you to kindly provide the same	As per BOQ
123	List of approved makes	UPS system	We request to approve Make : Riello Power India Pvt. Ltd, for UPS System	No change
124	List of approved makes	Active Harmonic Filter(AHF)	Request to give approval of M/s P2 Power Solutions Pvt. Ltd & Delta power Solutions (I) Pvt. Ltd., make also.	No change
125	EMD / Bid Security Bank Guarantee : Vo.I-I (NIT/PQ)	for preparing EMD / Bid Security Bank Guarantee	EMD / Bid Security Bank Guarantee : IFSC Code and Bank Details for preparation of BG against EMD.	(a) Name of the bank : Punjab National Bank. (b) Address : Sector-27, Noida (c) Beneficiary Name : HSCC (India) Ltd (d) Beneficiary A/c No. : 2726001800000011 (e) Branch Code : 2726 (f) Bank IFSC : PUNB0272600

The Validity of Bid Security/ EMD will be considered from the original date of bid submission i.e. 31.05.2019

All other terms & Conditions of the Tender shall remain unchanged.

Prospective bidders are advised to regularly scan through HSCC e-tender portal <http://www.tenderwizard.com/HSCC> & HSCC website <http://www.hsccltd.co.in> as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

(- Sd -)  
General Manger (Elect.), HSCC (India) Ltd.

**UNDERTAKING**

We do hereby undertake to engage a specialised agency after approval of HSCC for undertaking the execution of specialized works (\_\_\_\_\_ Name of the specialized work\_\_\_\_\_) whose minimum qualification shall be as under:

I. For Specialized works i.e. Audio Visual System, Solar Photovoltaic Power Generation & Boom Barrier System works:

- (i) Average Annual Financial Turnover during the last three financial years, i.e., \_\_\_\_\_, should be at least 50% of the estimated price of the works
- (ii) Experience of having successfully completed similar specialized works during last 7 years ending previous day of last date of submission of tenders should be either of the following:
  - (a) Three similar works each of value not less than 40% of the estimated cost put to tender or two similar works each of value not less than 60% of the estimated cost put to tender or one similar work of value not less than 80% of the estimated cost, put to tender, all amounts rounded off to a convenient figure.

**(Authorized Signatory of bidder)**