

Format for Technical Pre-Bid Queries

Tender I TPNODL/OT/2021-22/040, DATED: 22/07/2021

Package SUPPLY OF ELECTRICAL TESTING EQUIPMENTS

Note : The said format to be used only for Technical Pre-Bid Query. Any Commercial Query has to be strictly in Format B2 Format for Commercial Pre-Bid Query and sent separately
Format to be used for query regarding Technical Pre-Qualification Requirement, Safety Pre-Qualification Requirement, Technical Set of Document

Pre-Bid Query has to be sent in editable Excel file format only

Pre-Bid Query has to be sent through e-mail in TPNODL E-Tender System

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
1	2	3	4	5
1	Annexure-1 Schedule for Items SI No. 15	Primary Injection Test Set 0-600A with Variac	In Schedule of Items its written Primary Injection Kit 0-600A with Variac, but in Technial Specification it is 0-1000A. Pls confirm which one is required 0-600A or 0-1000A	Primary Injection Kit (0-600A)
2	Annexure-1 Schedule for Items SI No. 24	HI POT TEST SET AC 0-40KV AC 50mA	In SI No. 7 (Accessories) of Technical Specifications point no. (i) you have asked for 10Mtr Long Shielded output cable with fist sized clam. We will provide Bare conductor copper cable 10mtr long as shielded cable is not suitable as that will generate capacitive current and the capacity of the unit is too small to handle any capacitive current. Also pls confirm you require equipment in single part or two parts	we need DC HIPOT. We will prefer both as long it will provide all safety feature in Kit.

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
3	Annexure-1 Schedule for Items SI No. 5	Contact Resistance Meter (CRM 100B)	In Technical Specifications of CRM weight mentioned maximum 10kgs. Can the weight be between 15-20 kgs.	Ok. Within 15 Kg
4		Neon Tester 11KV-33KV-66KV Application: The Electronic detector should be capable of detecting up to from 230 V to 66 KV and suitable for indoor & outdoor application	<p>Since this is an important lifesaving safety equipment, essential type test requirements are missing.</p> <p>In other tenders also NESCO mentions Type Test Requirements for this equipment but these details are missing here.</p> <p>Please see the previous specs of NESCO. List of Type tests and previous specs of NESCO attached.</p>	As per tender documents

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
5		As per Annexure I, there is requirement of two type of infrared Thermo Scanning Camera i.e. 2 Nos. & 50 Nos. (Serial No. 20 & 21 of Annexure I) At some places it is mentioned make & model of the camera.	But it is not clear from the technical specification which camera to be quoted in which category. We are Authorized distributor of SATIR, Ireland from last 20 years our Infrared Thermo Scanning Cameras are used in reputed companies like BHEL, NTPC, PGCIL, PSTCL, DVC, Adani Group, Reliance Group, Alstom (now GE) and many more. Either kindly mention Equivalent make or consider SATIR make also.	product should be equivalent to model specified.
6		Detector Type not clearly mentioned (80X60, 160X120. 320X240. 640X24B1 please clarify	It is not clear from the tender documents that which type of detector is to be quoted in which category. In the tender documents there are various documents which are actually confusing. There is mention of 4 different types of detectors in the tender documents which we have downloaded and these are 80x60 , 160x120, 320x240 and 640x480. Kindly clarify which type of detector is required and request you to kindly keep the specifications as generalised as at some places the specifications are proprietary.	640X480
7		Hi-Pot Test Set AC 0-40KV AC 50mA Accessories : i) 10 Mtr. long shielded output cable with first sized clamp. ii) 10 Mtr long input AC flexible chord with plug. iii) Discharge rod with non-inductive resistance. Iv) Covers of HT Male & Female sockets. v) Housing of the set accommodates in itself HT & i1lain leads alid ulfter accessories. vi) A steel bet cover is provided on meters for protection. vii) Discharge/Earthing rod with non-inductive resistance. viii) Housing box	i) AC shielded cables are not available for 40KV for ac hi-pot set. Such cables are not being used anywhere. Instead Bare conductor with Insulated Stand may be used as per prevailing practice. No labs even like CPRI/ERDA/NTH use AC shielded cables for hi pot test because the charging current ot shiled cable will be huge alit it will translate as the leakage current of the test sample. Therefore kindly amend the specs accordingly. Shielded output cables are only used in DC Hi-pot Sets. vi) Steel net cover is not being used now a days, these were used in very old design Analog kits which dld not have adequete safety protections. Now a days advanced kits with advanced digital protections are used.	We need DC Hipot
8		Protection: AC Back feet Protection for Both operator & Material.	This clause is not applicable for AC set. These are specs of DC set wrongly mentioned here. Kindly amend.	we need DC Hipot

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
9		General Construction: The major components shall be as follows 1) HV output cable- Corona discharge free HT cable 2) HV male and female sockets- Corona discharge free 3) KV and mA meter with 4 inch deflection scale for better visibility and accuracy with spring shocker joule & damping by pass circuit provided for safety of sensitive meters. 4) Meter net- A heavy shielding net of 10 swg for the safety of the meters and against any HV charge. 5) Housing box- HV transformer partially resonant with zero surge factor having minimum PD losses for long life. 6) A device for return wave protection- A device is provided in the HV circuit which protects any	1. Bare conductor for output with insulated stands are used for AC output connection.	we need DC Output
10		Tests: The tests to be conducted are as given below: 1) Full load test 2) AC feedback protection for men and material	2) AC Backfeed not applicable here	we want DC HiPOT
11		Grounding Set for O/H Line Portable Earth End clamp: Special Aluminium alloy to withstand high tempertuare, having high electrical conductivity,	This should also be 3 nos. for 3 phase grounding	ok
12		Current Rating : suitable for carrying 11KA for short duration	The Current Carrying capacity of 25 mmsq cable is 4.8 KA for 1 sec or 6.7KA for 0.55 sec as per IEC 61230 which governs this product. Kindly the amend the same and mention the short time current rating in accordance to IEC 60130 because a 25mmSQ cable can never have 11KA current rating for short duration. Type test Requirements not mentioned for these essential lifesaving equipment IEC 601230 & IEC 61235	As per tender documents
13	1.0 SCOPE	Scope of the Specification includes technical requirements wrt manufacturing, testing, packing and forwarding, supply and delivery of chemicals and consumables for use in transformer oil testing Laboratory of TATA Power Co. Ltd, Odisha	Agreed Manufactured by GE Grid Solutions, Model-Transport X2, Product Catalogue attached. Packing forwarding & supply by Universal Industrial Corporation	Ok
14	2.0 APPLICABLE STANDARDS	The Gas Chromatograph standard covered under this specification shall be prepared for use in accordance with the latest editions of the following	GE Portable DGA Specification, Model-Transport X2 Technology: Photo-acoustic Spectroscopy	Ok
15	3.0 CLIMATIC CONDITIONS OF INSTALLATION	Chemicals to be supplied against this specification shall be suitable for satisfactory continuous operation under the following tropical conditions:	Calibration & consumable gas free design for autonomous field operation.	Input voltage range is 90-264V AC, Not clear. Does it 90-264V ??

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response																																																												
16	4.0 GENERAL TECHNICAL REQUIREMENTS	<p>DGA Calibration Gas Mixture</p> <table border="1" data-bbox="667 236 1072 459"> <thead> <tr> <th>Component Gas</th> <th>Standard 1</th> <th>Standard 2</th> </tr> </thead> <tbody> <tr> <td>Methane</td> <td>900-1100</td> <td>1400-1600</td> </tr> <tr> <td>Ethane</td> <td>900-1100</td> <td>1400-1600</td> </tr> <tr> <td>Ethylene</td> <td>900-1100</td> <td>1400-1600</td> </tr> <tr> <td>Acetylene</td> <td>900-1100</td> <td>1400-1600</td> </tr> <tr> <td>Hydrogen</td> <td>900-1100</td> <td>1400-1600</td> </tr> <tr> <td>Carbon Dioxide</td> <td>5000-5600</td> <td>6000-6700</td> </tr> <tr> <td>Carbon Monoxide</td> <td>5000-5600</td> <td>6000-6700</td> </tr> <tr> <td>Nitrogen</td> <td>Balance</td> <td>Balance</td> </tr> </tbody> </table> <p>All values mentioned above are in parts per million (ppm).</p> <p>The minimum difference between the concentration of Ethylene and Acetylene in one CG Mixture should at least be 90 ppm, i.e. if in one standard the concentration of Ethylene is 950 ppm then in that standard the concentration of acetylene must be 1040 or more.</p> <p>The gas mixtures must be supplied in pressurised 0.5l aluminium canisters so that the volume dispensed is approximately 10 litres $\pm 5\%$. The provided standard shall have a minimum accuracy of 98% and shall be endorsed with</p>	Component Gas	Standard 1	Standard 2	Methane	900-1100	1400-1600	Ethane	900-1100	1400-1600	Ethylene	900-1100	1400-1600	Acetylene	900-1100	1400-1600	Hydrogen	900-1100	1400-1600	Carbon Dioxide	5000-5600	6000-6700	Carbon Monoxide	5000-5600	6000-6700	Nitrogen	Balance	Balance	<p>Measurement Range: Range for dissolved gas-in-oil samples Range for Buchholz-Gas samples</p> <table border="1" data-bbox="1090 256 1583 671"> <thead> <tr> <th>Gas</th> <th>Range</th> <th>Range</th> </tr> </thead> <tbody> <tr> <td>Hydrogen (H₂)</td> <td>5 - 5,000 ppm</td> <td>50 - 5,000 ppm</td> </tr> <tr> <td>Carbon Monoxide (CO)</td> <td>2 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Carbon Dioxide (CO₂)</td> <td>40 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Methane (CH₄)</td> <td>2 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Acetylene (C₂H₂)</td> <td>0.5 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Ethylene (C₂H₄)</td> <td>2 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Ethane (C₂H₆)</td> <td>2 - 50,000 ppm</td> <td>50 - 50,000 ppm</td> </tr> <tr> <td>Water (H₂O) – Relative humidity</td> <td>0-100%</td> <td>0-100%</td> </tr> <tr> <td>Accuracy - Moisture in Oil</td> <td>$\pm 3\%$ n/a</td> <td></td> </tr> <tr> <td>Accuracy – other gases</td> <td>$\pm 5\%$ or \pm LDLppm (whichever is greater)</td> <td>$\pm 30\%$ or \pm LDL ppm (whichever is greater) for all gases</td> </tr> </tbody> </table> <p>Standalone DGA field instrument capable of measuring seven diagnostic gases and moisture.</p> <p>The Portable Kit, Model- Transport X2, Make-GE measures gas</p>	Gas	Range	Range	Hydrogen (H ₂)	5 - 5,000 ppm	50 - 5,000 ppm	Carbon Monoxide (CO)	2 - 50,000 ppm	50 - 50,000 ppm	Carbon Dioxide (CO ₂)	40 - 50,000 ppm	50 - 50,000 ppm	Methane (CH ₄)	2 - 50,000 ppm	50 - 50,000 ppm	Acetylene (C ₂ H ₂)	0.5 - 50,000 ppm	50 - 50,000 ppm	Ethylene (C ₂ H ₄)	2 - 50,000 ppm	50 - 50,000 ppm	Ethane (C ₂ H ₆)	2 - 50,000 ppm	50 - 50,000 ppm	Water (H ₂ O) – Relative humidity	0-100%	0-100%	Accuracy - Moisture in Oil	$\pm 3\%$ n/a		Accuracy – other gases	$\pm 5\%$ or \pm LDLppm (whichever is greater)	$\pm 30\%$ or \pm LDL ppm (whichever is greater) for all gases	Is it suitable for Easter also?? What is the range for it?
Component Gas	Standard 1	Standard 2																																																														
Methane	900-1100	1400-1600																																																														
Ethane	900-1100	1400-1600																																																														
Ethylene	900-1100	1400-1600																																																														
Acetylene	900-1100	1400-1600																																																														
Hydrogen	900-1100	1400-1600																																																														
Carbon Dioxide	5000-5600	6000-6700																																																														
Carbon Monoxide	5000-5600	6000-6700																																																														
Nitrogen	Balance	Balance																																																														
Gas	Range	Range																																																														
Hydrogen (H ₂)	5 - 5,000 ppm	50 - 5,000 ppm																																																														
Carbon Monoxide (CO)	2 - 50,000 ppm	50 - 50,000 ppm																																																														
Carbon Dioxide (CO ₂)	40 - 50,000 ppm	50 - 50,000 ppm																																																														
Methane (CH ₄)	2 - 50,000 ppm	50 - 50,000 ppm																																																														
Acetylene (C ₂ H ₂)	0.5 - 50,000 ppm	50 - 50,000 ppm																																																														
Ethylene (C ₂ H ₄)	2 - 50,000 ppm	50 - 50,000 ppm																																																														
Ethane (C ₂ H ₆)	2 - 50,000 ppm	50 - 50,000 ppm																																																														
Water (H ₂ O) – Relative humidity	0-100%	0-100%																																																														
Accuracy - Moisture in Oil	$\pm 3\%$ n/a																																																															
Accuracy – other gases	$\pm 5\%$ or \pm LDLppm (whichever is greater)	$\pm 30\%$ or \pm LDL ppm (whichever is greater) for all gases																																																														
17	5.0 GENERAL CONSTRUCTION	NA	Robust design with IP67 rating when closed																																																													
18	6.0 NAME PLATE AND MARKING	<p>The supplied chemicals shall have a label on the bottle bearing at least the following details</p> <ul style="list-style-type: none"> • Name of Manufacturer • Quantity of packaging • Composition and purity/assay • GHS symbols as applicable • Year and month of Manufacture • Lot No. (if applicable) 	Name for the Manufacturer: GE Grid Solutions. The Portable Kit, Model- Transport X2, Make-GE measures gas levels by using Photo Acoustics Spectrometer. The unit doesn't require Calibration & Carrier gases for operation	If no carrier gas, its OK. Does this kit having self calibration provision																																																												
19	7.0 TESTS	All the material supplied shall be tested at manufacturer end and Certificate of Analysis mentioning the results of tests conducted as	Agreed (During Supply, we will provide the test & Calibration Certificate)	OK																																																												
20	8.0 TYPE TEST CERTIFICATES	NA		Agreed																																																												
21	9.0 PRE-DISPATCH INSPECTION	Pre-dispatch inspection shall be waived off.	Agreed (Pre-dispatch inspection should be waived off as it is an imported item)	OK																																																												
22	10.0 INSPECTION AFTER RECEIPT AT STORES	The material received at Tata Power Co. Ltd., Odisha store/workshop/laboratory, shall be inspected for acceptance and shall be liable for rejection, if found different from the Purchase Order or not meeting required technical parameters. Manufacturing date shall not be 30 days prior to the date of delivery at TATA Power Co. Ltd, Odisha's Stores. Certificate of Analysis shall be valid for not less than 11 months from the date of receipt at TATA Power Co. Ltd.	Agreed																																																													

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
23	11.0 GUARANTEE	The chemical shall not degrade its chemical properties within specified shelf life period. Bidder shall be liable to replace it at their own cost.	Does not require any chemical for safe operation of the unit	OK
24	12.0 PACKING	All the material shall be packed in aluminum canister of 500 ml or higher. The bidder shall ensure that all material is prepared for rail/road transport in a manner so as to protect the material from damage in transit. The material used for packing shall be environmentally friendly. Each packaged canister shall be provided with MSDS (material safety data sheet) instructions.	Our DGA unit shall be packed in a hardened Transit Case with IP67 protection.	OK, internal cushion shall be provided to absorb jerks during transport
25	13.0 TENDER SAMPLE	No Tender Sample shall be required. However all material shall strictly conform to requirements and any deviation other than those approved, if any, shall render the material liable for rejection.		
26	14.0 TRAINING	NA	During supply, we will provide onsite Training for operation of the unit	OK
27	15.0 DRAWINGS AND DOCUMENTS	All the material shall be accompanied with MSDS during the first supply in the RC. Furthermore, all material shall be accompanied with Certificate of Analysis during each supply.	Agreed	Agreed
28	16.0 GUARANTEED TECHNICAL PARTICULARS	Bidder to comply all above clauses as per specification.	Agreed	Agreed
A	Auto Tan Delta			
30	General requirement 2.1	2.1 The test set should be able to perform Insulation power factor tests, automatic tip-up tests, HV turns ratio tests with an optional TTR capacitors and can measure power factor, dissipation factor, excitation current, Narrow band DFR 1-500 Hz, watt-loss, inductance, Capacitance, Voltage & Current	The main application of performing the Tangent Delta test at variable frequency is to detect effect of moisture and if the Tangent Delta increases considerably in the low frequency range, this is a clear indication of moisture ingress in the insulation. However, to achieve above application the frequency range of 15-400Hz is more than sufficient. Even in CIGRE445 standard (Guide for Transformer Maintenance), the section pertaining to HV bushings (Section 5.1.3) indicates a frequency range of 20-400Hz for above application In view of above we sincerely request you to consider the frequency range of 15-400Hz	OK
31	General requirement 2.4	to detect voltage dependence of high voltage components automatically (where tip-up testing is recommended) and gives an alarm suggesting additional test to be performed at different voltage levels. The test set should measure Narrow band DFR from 1-500 Hz or better	As tan delta is normally measured at power frequency and also Frequency sweep is used between 15Hz to 400Hz as explained above. Hence please remove "Narrow band DFR from 1-500 Hz"	OK
32	General requirement 2.5	2.5The test set should be operated with the help of a laptop computer loaded with asset management software for automatic testing and reporting	As our test set has an inbuilt display and controller, we request you to make the laptop optional and to be included only if the kit does not have an onboard display. Please also mention if in inbuilt data storage in kit/minimum 1GB is required or not?	Laptop must be supplied with loaded softwares and cable accessories
33	General requirement 3.4	3.4 Output Frequency: 1-505Hz (0.0001Hz Resolution) Accuracy: +/- 0.005% of reading	As explained in clause 1 above please change the output Frequency to 15-400Hz	OK

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
34	General requirement 3.5	3.5 Test Frequency Range: 45-70 Hz (12 kV) 15-400 Hz (4 kV) 1-505 Hz (250V)	We request you to kindly make it more generalised as below: Test Frequency 15-400Hz @ 3.6KV Test Frequency 45-400Hz @ 12KV 9This will ensure performin a frequency sweep at 12KV between wider frequency of 45-400Hz instead of just 45-70Hz.	OK
35	General requirement 3.6	Output Current: 300mA (4 minutes)	Output current. 100mA continuous and 300mA (>2 minutes) as this will be more than enough for tandelata measurement. In your case the main application is for testing substation assets and for all substation equipment the capacitance range is generally < 80nF. The range of microfarad is generally required for generator testing which we understand is not your application	Clarify :- What is the time required to perform one reading?. What should be min gap between two tests if output current is more than 100mA?
36	4.0 MEASURING RANGE:	Capacitance: 0 to 100 micro Farad,	Capacitance Range :1pF to 3µF is more than enough.	OK
37	4.0 MEASURING RANGE:	Inductance: 6H to 10 MH,	Range should be -Range:10H-1MH as this is more than enough any application	OK
C	Queries for CT Analyzer			
38	4. GENERAL TECHNICAL Sr.no. 3	Range: 1 MΩ to 10 GΩ Range: 1MΩ to 10GΩ Accuracy: ±3% Accuracy: ±3% Test Voltage: 500V Test Voltage: 500V Resolution: 3 digits Resolution: 3 digits	Insulation testing is not part of CT Analyzer. Hence please remove this. Also this particular applicationb only belongs to a particular make only.	OK
39		Voltage Display Range: 1 to 10,000 V Range: 1 to 10,000 V Accuracy: ±2% ±0.5V Accuracy: ±2% ±0.5V Resolution: 3 digits. Resolution: 3 digits	The CT analyzer is working on the principal of secondary injection using low voltage and variable frequency. Hence the mention of 10KV voltage is not necessary.	What is low voltage injected - Max?
	SECONDARY CURRENT INJECTION WITH TIMER			

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
40	Doc No. ENG-GEN-37	Composite relay testing kit for single phase injection and testing features for current and voltage operated protections.	<p>1. If the requirement is for testing of single phase over current relay, Earth fault relay and other single phase relays only. Accordingly we will quote suitable single phase secondary injection test set.</p> <p>2. In your specification, clause 3(3) you asked 600V as below. 600V will not be required. Voltage output of 150VAC and 220VD and Voltage input range up to 300V is provided. This is sufficient for all single phase testing application. Please confirm if above ranges are acceptable</p> <p>3. In Clause 4(d) you have asked for 'Automatic reclosing devices test facilities shall also be required'. There are altogether different kits for 'testing of reclosers'. Hence please remove it because this is not part of standard single phase relay test set. or please clarify if you mean just functional testing of recloser by injecting current.</p> <p>4. In Clause 5. Additional Features, you have asked for 'Plotting excitation curves'. This again is not part of</p>	To be discussed
41		Transformer Turns Ratio Meter:- Battery life: up to 12 Hrs	Kindly amend clause to "Mains Power Supply Single Phase 230V, 50Hz operated OR battery". Reason: Being a standard model of OEM's, every OEM will have different Power supply operation mode. So, a specific requirement will lead to qualify selected bidder only and competitive bidding will not be possible.	Share Power supply range
42		Display Full Graphics LCD module, adjustable backlighting, wide temperature range, 128 x 64 dots (21 characters by 8 lines)	Kindly amend it to "Large LCD Display with backlight or better". Reason: Being a standard model of OEM's, every OEM will have different display size and specific requirement will lead to qualify selected bidder only and competitive bidding will not be possible. Also, maximum measured parameter is possible display on Large LCD display.	To be discussed
43		Weight Suitable to carry by hand less than 10 KG	Kindly amend it to "Suitable to carry by hand or it should be easily ported	Should be less than 10 kg for easy transport from site to site

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
44		Capacitance & Tandelta measurement Test Set:- HV turns ratio tests with an optional TTR capacitors and can measure power factor, dissipation factor, excitation current, Narrow band DFR 1-500 Hz 0-505Hz(250V)	Kindly amend clause to "Narrow Band DFR 15-400 HZ Reason: In fact, the CIGRE guidelines says for above range OF DFR required for all types of tests. Kindly remove the Optional TTR Test with Optional Capacitors Reason: Being a standard model of OEM's, every OEM will have different optional Accessories. So, a specific requirement will lead to qualify selected bidder only and competitive bidding will not be possible. 0-505 Hz(250V) – Not Required, request to Please remove.	OK
45		Output Current: 300mA (4 minutes)	Kindly amend it to "Out Put Current- 100 mA Continuous or better" and 180 mA - Intermittent 1)Reason: For even Highest Capacity of 765KV Sub Station, for testing all types of devices, Current 100mA is more than enough to test conduct. 2)Reason: Being a standard model of OEM's, every OEM will have different display size and specific requirement will lead to qualify selected bidder only and competitive bidding will not be possible. Also, maximum measured parameter is possible display on Large LCD display.	
46		Make- Megger (Single Manufacturer)	Kindly amend & add make HAEFELLY- TETTEX for healthy competition and kindly approve TETTEX , as it is a Globally accepted brand.	OK
47		Contact Resistance Meter: Current 100A DC	Kindly amend it to "Current 100A DC or better" considering resistance measurement range suitability.	100A DC or more with selection option
48		TRANSFORMER WINDING RESISTANCE METER:- Static Resistance Measurement Measurement range: 0.1 $\mu\Omega$ – 10k Ω	Considering scope of Testing, maximum Resistance measurement value can be go up to Ohms only. 10KOhm requirement will lead to selected bidders to qualify and avoid quality of product from competition. Many of bidders are providing measurement range up to 2KOhm only. So, kindly amend it to "Measurement range: 0.1 $\mu\Omega$ to 2k Ω ".	Normal resistance is always lower however in case of winding defect, it can give idea about high resist.
49		AC Current Measurement Channel Resolution: 0.1 ms Amplitude resolution: 16 bit	Kindly request you to remove this clause, as it is not related to Winding Resistance Measurement function. Winding resistance measurement is a DC test hence, it will charge and Magnetized core. So, request you to add "Demagnetization and Auto discharge after test features".	OK, Demagnetisation and Auto discharge with beeping sound required
50		LIVE LINE DETECTOR (NEON TESTER). Application The Electronic detector should be capable of detecting up to from 230 V to 66 KV and suitable for indoor & outdoor application	We have confirmed with TPNODL and actual requirement of line sensing is up to 33KV at site. So, we request you to kindly amend detecting range from "230V to 33KV."	what will be case , if 33 kV voltage is more than 36 kV due to system issue, say 40 kV.

Sr. No.	Detailed Reference to TPNODL Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification by UIC	TPNODL Response
51		Selector Switch Position	The main purpose of Live Line detector is to confirmed Power presence in line. If we use selector switch in detector and due to any mishandling selector switch is not set to correct sensing selection, then it will lead human life in risk. Also due to mechanical operation in switch, there may be chances of getting loose contact due to multiple time switch operations. So, we request you, kindly remove "Selection Switch clause".	OK, test button shall be provided
52		Timing of circuit breakers:- Safety feature In case of opening of control panel, "Auto Cut" feature shall be provided for safety purpose	If required to open Front Panel for Service purpose, power is already cut off for safety purpose and instrument will not pass any signal. So, kindly request you to remove this clause.	OK
53		Insulation Tester Digital 0-5KV: V Range: Minimum 100 to 5000 V DC with selection provision	Kindly amend to minimum 250V to 5000 V DC with selection provision or in steps of 50V selection.	250V to 5000 V DC is OK
54		IR range: 0 - 50000 M Ohm or better	Considering scope of testing in 400KV SS, insulation resistance value of some of DUT's are more than 50 G Ohm range. So, kindly request you to amend IR range as "10 Tera Ohm or better".	50 Gohm or more is OK
55		With internal rechargeable dry cell battery (1.5/3V AA, AAA size batteries are not accepted).	So, we request you to kindly amend Specifications to "Internal rechargeable battery with Li ion type and Mains Power operated"	AA / AAA size not acceptable