POWER GRID COMPANY OF BANGLADESH LIMITED

Bidding Document for Procurement of

Supply of Different Types tools and safety equipment for PGCB Maintenance Upgradation

[Contract No.: PGCB/WB/ESPNERP/Safety-tools/Lot-2]

RFB Ref. No.: 27.21.0000.101.07.423.24.1493

Clarification 01

A Pre-bid meeting was held on 27 March 2024 as mentioned in the RFB, and Clarifications to the queries received from the prospective Bidders regarding the Bidding Documents prior to and during the Pre-bid meeting and after the Pre-bid meeting are given below which will form part of the bidding document.

Sl. No.	Volume / Section / Clause No / Drawing No	Bidder's Query	PGCB's Reply	Addendum (Y/N)
1.	Volume 1 of 2, Section-2 BDS ITB 11.2 (i) viii	Here it is mentioned that The Supplier shall submit Maintenance Manual, User Manual, and Safety Guidelines as per Manufacturer Policy along with the Bid. We have the following Clarification in this regard • Since Most of the Manufacturers have requested that the subject manuals etc are generally submitted during execution stage and does not have any relevance at bidding stage, hence it is requested to kindly accept the submission of the same during execution stage. For your Confirmation Please.	The supplier has to submit these manuals before finalizing the contract document based on the evaluation, if the contract is awarded to that supplier.	
2.	Volume 1 of 2, Section-2 BDS ITB 11.2 (i) ix	Here it is mentioned that "The Manufacturer of the goods shall have a valid website address and the Supplier shall have to submit the manufacturer's details, including a valid mail address and contact number. During the evaluation process, the technical specification and other necessary information may be verified from the given address. PGCB reserves the right to reject any bid in case of unsuccessful verification" We have the following Clarification in this regard The items are generally represented through the nominated Distributor for the Region, please inform whether the contact details of Distributor can be shared and acceptable to PGCB.	Please follow the Bid document.	
3.	Volume 1 of 2, Section-2 BDS ITB 11.2 (i) x	Agent Agreement (if applicable): In case the Supplier appoints an agent to act on behalf of the Supplier for this procurement, the Supplier and the agent must sign an Agent Agreement, clearly mentioning specific roles and responsibilities of the Agent and the Supplier. We have the following Clarification in this regard The items are generally represented through the nominated Distributor for the Region, and these agreements are not done on project basis and private business understanding not shared with any third party. Can we share the letter issued by Principal to the distributor to act as per their representative. Please confirm.	It can be accepted.	
4.	Volume 1 of 2, Section-2 BDS Section-8 SCC 15.1 ITB 14.5	It is mentioned here that "The prices quoted by the Supplier shall not be subject to adjustment during the performance of the Contract" However there has been a Price Variation Formula given in the Bid document which to our understanding should be NOT APPLICABLE. Pls confirm.	Yes. Your understanding is correct. It is "Not Applicable"	

5.	Volume 1 of 2, Section-2 BDS ITB 14.8	Here 9 Nos Different Divisions are mentioned as final destinations of the various equipment. We have the following clarification in this regard • As per our understanding the necessary storage place for such equipment in good condition shall be provided at the identified divisional stores by PGCB. Please confirm. We request that PGCB must share the list of equipment along with quantities to be delivered to the specific divisional stores at this stage itself. Please clarify.	PGCB will share the exact location with quantity after award of contract.	
6.	Volume 1 of 2, Section III EQC Manufacturer Experience and Technical Capacity	Here is mentioned that "Each single equipment or tool shall be certified, the certification shall not be considered valid if not provided by an accreditation body worldwide recognized". We have the following Clarification in this regard Many of the items which are to be supplied are mechanical in the nature and may not be governed by any certification from ILAC/MRA. Hence the certification shall only be submitted for the items/tools wherever it is applicable and not for all the tools and equipment. Please confirm.	It is confirmed that each single equipment or tool shall be certified, the certification shall not be considered valid if not provided by an accreditation body worldwide recognized. Whenever applicable the accreditation body shall be recognized by ILAC/MRA.	
7.	Volume 1 of 2, Section IV Bidding Forms Form of Bid Security (Bid Bond)	To our understanding, Bid Bond is not at all acceptable as per BDS Clause ITB 19.1. Please confirm.	Please follow the Bid document.	
8.	Volume 1 of 2, Section IV Bidding Forms Price & Completion Schedule Related Services	Here the prices against the item Training/Workshop has been sought however no payment terms are defined for the same in GCC/SCC. It is requested that the same must also be categorically defined to avoid any issue during execution stage.	10% advance payment and 90% upon completion of the training. Please follow the Addendum.	Y
9.	Volume 1 of 2, Section-VII Inspection and Test 5.1 Training and	Here it has been mentioned that • 4-day training for 40 Engineers should be conducted on the following equipment. • Training/Workshop would be divided into two groups. Each group shall contain 20 Engineers for 2 days.	It is not mandatory to have a trainer as a representative from the manufacturer, the trainer has to have a proven track	Y

	Workshop	Also there are list of about 20 Equipment which is provided in the Table in the subject section. We have the following clarification in this regard • We understand that the said training or workshop is to be provided in Bangladesh to familiarize the Identified Engineers of PGCB on practical operation of the equipment so that they can use the same effectively for O&M purpose. Since the Equipment Varieties are significantly high and all equipment may be from different vendors, hence it shall not be practically possible to conduct the training for one equipment at a time. Also ultimate purpose of these training is as mentioned above, hence it need not be mandatorily to be provided by manufacturer representative and trained operators of the subject equipment shall also be eligible to conduct such training sessions. Please confirm. • Since there are variety of equipment's in the list hence for conducting the training effectively, it is requested that the delivery of at least one piece/set of all these equipment's must be made at a common Designated place of PGCB Store. Kindly confirm the acceptance of the said proposal. • As per our understanding no per diem allowance/Hotel Stay/ or other logistics for the PGCB engineers is to be arranged by the supplier and the same shall be arranged by PGCB themselves. Please confirm.	record of experience showing her/his suitability for the duty. Training/Workshop would be divided into two groups. Each group shall contain 20 Engineers for 5 days. Please follow the Addendum. PGCB Shall not take the responsibility of organizing the storage of the equipment for training. In this case the Supplier has to arrange a dedicated storage under his responsibility. However, some of the equipment training (Transformers, Breakers etc.) can be only possible at substations on the actual equipment. In that case, PGCB's substations can be used as training venues. No hotel and per diem is required; Venue, food, and entertainment can be considered.	
10.	Volume 1 of 2, Section-VII Inspection and	It is mentioned here that Delivered materials will be accepted after testing at PGCB facilities and/or facilities within Bangladesh decided by the Purchaser in the presence of Supplier's representative (if they so desire). The cost of the post-delivery inspection will be borne by the Purchaser.	The testing facility other than PGCB can be any laboratory/institution	

	Testing 5.2 Post Landing Inspection	We have the following clarification in this regard • We understand that the testing facility other than PGCB can be any laboratory/institution accredited by local/international agency. Pls confirm. The testing and acceptance of the equipment must be concluded within 30 days of the material delivery at Site in order to make the process faster. Pls Confirm.	accredited by Bangladesh Government Authority. PGCB will choose the equipment for testing during post-landing inspection, if needed.	
11.	Volume 1 of 2, Section-VII Inspection and Testing Shipping Requirement	We understand that there is no FAT applicability in the said project and all the equipment shall be dispatched with due approval from PGCB on successful internal tests and its report. Pls Confirm.	Yes. Your understanding is Correct.	
12.	Volume 1 of 2, Section-IX Special Condition of Contract GCC 16.1 Payment Terms	We have the following clarification in this regard • For Schedule No-1 & 2 Payment terms are defined but mode of payment for foreign and Local Currency is not specified. Please clarify on the same. • Also, please specify the payment terms and condition for training and workshop to be conducted locally. • Please clarify whether advance payment shall be released through Letter of Credit or Direct Account transfer? Also, it is mentioned here that the payment shall be released within 45 days from date of receipt of applicable documents to certify the payment release. As per our understanding the 45 Days period is applicable for releasing the payment to the supplier/contractor. Please confirm if our understanding is correct.	All the payment shall be done by direct disbursement method. 45 Days period is applicable for releasing the payment to the supplier/contractor.	
13.	Volume 1 of 2 Payment Terms: (GCC Clause No. 16.3 - Page.143&144)	You have asked payment terms as below: • Advance Payment : 10% • On shipment : 55% Acceptance of PLI Report : 35% Generally, for supply items payment should be in two stages i.e 90% on shipment and 10% after PLI Report or FAC. So we request you to please consider payment terms as below: • Advance Payment : 10% • On Shipment : 80% On PLI Report or FAC : 10%	Your proposal is not acceptable. Please follow the Bid document.	

14.	Volume 1 of 2 Delivery: (Sec-VII) Page 101	You have asked delivery within 270 days from the date of effectiveness of the contract, which is very short for such a big tender with many equipment. Because huge time is required to manufacture, Trial Test and shipment processing. Also voyage time for sea shipment is too long from differetnt countries. So, we are requesting you to please consider 270 days from opening of operative Letter of Credit (L/C).	Please follow the Bid documents. The Supplier shall supply all the Goods and Related Services included in the Scope of Supply within 270 days from the date of effectiveness.	
15.	Volume 1 of 2 Currency of Bid	In ITB Clause No. 15 of page 19 & BDS Clause No. ITB 15.1 of page 48, you have mentioned the currency that shall quote in the "CURRENCY OF THE PURCHASER'S COUNTRY" (which is Bangladesi taka). But in BDS Clause No. ITB 36.1 of page 51, it is mentioned for bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in "VARIOUS CURRENCIES" into a single currency "United States Dollar (USD)", which is contradictory. We are requesting you to please mention the specific currency to be used during bid.	ITB/BDS 15.1 is for currencies of bid and payment, and ITB/BDS 36.1 is conversion of single currency for the bid evaluation purpose . These 2 clauses are for different purposes so there is nothing contradictory.	
16.	Volume 1 of 2 Manufacturer's EMC certificate of conformity, Manufacturer's Safety certificate conformity and Manufacturer's certificate of test conformity	The bid package comprises of a total 62-line items of multiple categories of safety tools and maintenance and testing equipment. It is difficult on the part of a specific bidder to prepare and submit a responsive bid at one hand. On the contrary, the bid requires Manufacturer's EMC certificate of conformity, Manufacturer's Safety certificate conformity and Manufacturer's certificate of test conformity for all the items. This may be noted here that Manufacturer's EMC certificate of conformity, Manufacturer's Safety certificate conformity and Manufacturer's certificate of test conformity are applicable for the main electrical equipment, for example, Transformer, Cable, GIS, CT, PT, AIS, Relay etc. We would earnestly request you to kindly omit the requirement of Manufacturer's EMC certificate of conformity, Manufacturer's Safety certificate conformity and Manufacturer's certificate of test conformity those are required against all the relevant items.	Certificate of conformity as per the applicable standard shall be provided for all the items. For the main electrical equipment such as Transformer, Cable, GIS, CT, PT, AIS, Relay etc, the bidding document requirements shall be strictly followed.	
17.	Volume 1 of 2 section III-EQC	Section III- Evaluation and Qualification Criteria has the following text- "The Supplier shall demonstrate that it has successfully completed at least Two (02) contracts, where the aggregated value have to be Six (06) million USD with supply for 33kV or higher voltage rating	Your proposal is not acceptable.	

		electrical equipment, within the last Five (05) years prior to bid submission deadline…" Please the above as per following- "The Supplier shall demonstrate that it has successfully completed at least Two (02) contracts, where the aggregated value have to be Six (06) million USD with supply for 11kV or higher voltage rating electrical equipment, within the last Five (05) years prior to bid submission deadline…"	Please follow the Bid document.	
18.	Volume 1 of 2 section III-EQC	We request you to relax the financial requirement of USD 1,000,000 for JV partners so that local suppliers having proven supply record of similar items can easily form a JV and participate in the tender	Please follow the Bid document.	
19.	Volume 1 of 2 section III-EQC	It is mandated that each single equipment or tool shall be certified from ILAC MRA. Most of the European and American manufacturers follow EU Directive and ASTM/ANSI standards. As such imposing an ILAC MRA certification will drastically reduce offers from genuine and qualified manufacturers. Therefore, we request you to remove this requirement.	Please follow the Bid document.	
20.	Volume 1 of 2 Payment Terms	Please specify the provision of part payment in the bid document in the case of part supply. Since there's a large number of items, there should be a clear provision for partial payment against partial supply.	Please follow the Bid document.	
21.	Volume 1 of 2 Section II – Bid Data Sheet (BDS), ITB 11.2 (i), iii and Section II – Bid Data Sheet (BDS), ITB 17.2 (a), 1	"Supplier shall furnish the manufacturer's authorization duly signed by the manufacturer as well as the Supplier for all offered equipment. Production Place/Factory Address must be mentioned in the manufacturer's authorization letter." and "Authorization Letter from respective Manufacturers is required in its own letterhead pad, duly signed by both the manufacturer and Supplier. Manufacturer's Authorization Letter is required for the Item No: 1-2, 4-21, 23-24, 29-30, 34, 38, 43, 45-46, 49-59, 61-63 listed in the Price and Delivery schedule for Goods." As per our understanding we have to provide Manufacturer's Authorization Letter as per ITB 17.2 (a), 1 clause. Please confirm, our understanding is correct.	Yes. Your understanding is correct.	
22.	Volume 1 of 2 Section VII –	5.1 Training/Workshop: 4-day training for 40 Engineers should be conducted on the following	Training will be conducted locally.	Y

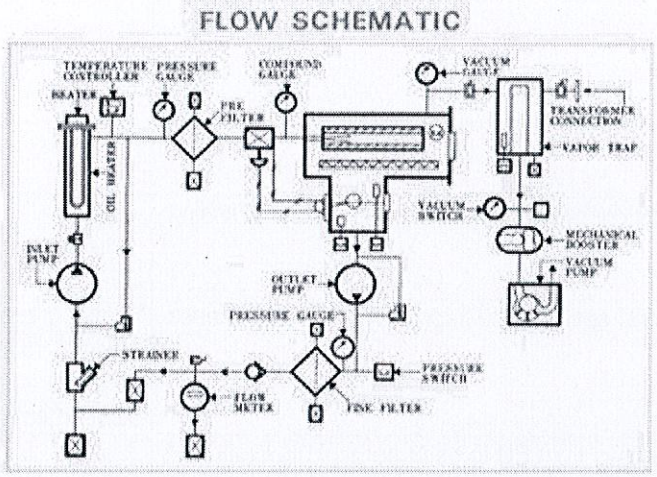
	Schedule of Requirements: 5. Inspections and Tests:	equipment. As per our understanding the training will be conducted locally. Please confirm our understanding is correct.	Please follow the Addendum.	
23.	Volume 1 of 2 Section II – Bid Data Sheet (BDS), ITB 15.1 and ITB 36.1	ITB 15.1: The Supplier is required to quote in the currency of the Purchaser's Country the portion of the Bid price that corresponds to expenditures incurred in that currency. and ITB 36.1: The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: United States Dollar (USD) The source of exchange rate shall be: http://www.bangladeshbank.org/econdata/exchangerate.php. The date for the exchange rate shall be the date of opening of Bids. We have seen in previous Tenders of PGCB funded World Bank, the clause is like below: The currency (ies) of the bid shall be as follows: Up to maximum three foreign currencies and the currency of the Employer's country. As per our understanding, the Bidder shall quote the bid price in maximum three foreign currencies. Please confirm our understanding is correct.	The Supplier may express the Bid price in any currency. If the Supplier wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Purchaser's Country.	
24.	Volume 1 of 2 Section III, Qualification Criteria (ITB 32.1, (d)) Page No. 54	It is mandated that each single equipment or tools shall be certified form ILAC MRA. Most of the European and American manufacturer follow EU Directive and ASTM/ANSI standard. As such imposing an ILAC MRA certification will drastically reduce offers from genuine and qualified manufacturers. Therefore, we request you to remove this requirement	It is confirmed that each single equipment or tool shall be certified, the certification shall not be considered valid if not provided by an accreditation body	

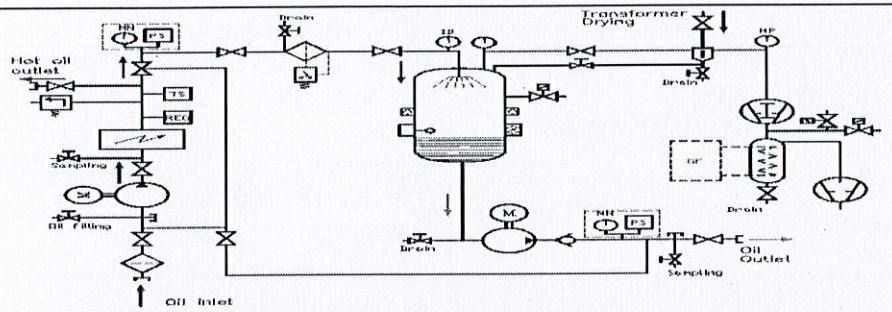
			worldwide recognized. Whenever applicable the accreditation body shall be recognized by ILAC/MRA	
25.	Volume 1 of 2 Section VII – Schedule of Requirements: 5. Inspections and Tests:	5.1 Training/Workshop: 4-day training for 40 Engineers should be conducted on the following equipment. Will client allow freshly supplied item(s) to be used for training as demo equipment?	Yes, it is allowed to use the freshly supplied item(s) for training purposes. This is absolutely bidder's responsibility how they will conduct the training. However, please see the addendum- for the training duration and the list of equipment for training.	Y
26.	Vol 1 of 2 ITB clause 19.3 Bank Guarantee	We are requesting to allow the Bank Guarantee from the local agent on behalf of the principal supplier. However, the performance Guarantee will be submitted by the principal supplier directly as they are responsible for smooth execution of project delivery of goods, warranty and after sales service. To encourage the participation of such an international bid requesting to accept BG from local agent in USD on behalf of the principal.	The Bid Security shall be submitted by the supplier not by their local agent.	
27.	Vol 1 of 2 section VII- schedule of Requirement	Please confirm the quantity of # item no. 57- Three phase Automated Transformer Test set and # item no. 63- Portable reference standard meter class 0.05 and Power quality analyzer.	Quantity of # item no. 57-Three phase Automated Transformer Test set -Please see the Addendum. Quantity of # item no. 63- Portable reference standard meter class 0.05 and Power quality analyzer - Please follow section VII-	Y

IKCs

			Schedule of Requirement.	
28.	Volume 2 of 2, Technical Specification and Technical Requirement Pictorial Representation of the various Equipment	It is to submit that though the tender has categorically clarified that "***All the pictures of the equipment are for visual understanding and tender purpose only. Actual product may be appeared different than the pictures given in the tender"*** *but still some of the pictures has been included which are creating a lot of confusion of Brand Specificity resulting in other vendors hesitant to quote for the same equipment as they are interpreting it in a biased manner.* We have the following clarification in this regard Bidders are completely free to propose any equipment which is compliant to the project requirement. Please confirm if the understanding is correct.	It is confirmed that the images are only indicative and have been inserted to clarify what they represent. Suppliers may propose equipment that does not conform to the figures, but meets the points required in the specification.	
29.	Volume 2 of 2, GTP High Vaccum Txr Oil Purifier	We have the following clarification in this regard • In this GTP at Sl No. 6 the Capacity of oil flow rate has been asked at 1000-1200 L/H while at Serial No. 14 & 15 the inlet and outlet pump capacities are asked @ 12000 L/H which is 10 Times the overall equipment capacity desired. Please Clarify your position in this regard. • At item no. 10 'Flow Schematic' a flow diagram has been imposed. However, different manufacturer's may have different flow diagrams to achieve the desired objectives of the equipment. Hence to our understanding, the manufacturer shall not be bound to follow the depicted flow diagram as it may be specific to a particular manufacturer and may not be possible to comply by all the manufacturer in totality. Please clarify. • For Item No. 30, 31 & 32 Hoses and Fittings, it is understood that the required Qty must be supplied by the Supplier and cost of the same shall be deemed included in the main items price quoted in the prices schedule. Please confirm if the understanding is correct.	1- (Typing Error) Capacity of oil flow rate is 10,000 to 12,000 L/H. Please follow the Addendum. 2- Flow diagram is Sample only. 3- Your understanding is correct.	Y
30.	Volume 2 of 2, GTP Vaccum Pump System for Transformer	• For Item No. 13, 14 & 15 Hoses, Fittings, Spare parts it is understood that the required Qty must be supplied by the Supplier and cost of the same shall be deemed included in the main items price quoted in the prices schedule. Please confirm if the understanding is correct.	Your understanding is correct.	
31.	Volume 2 of 2, GTP Safety Ground for TL & SS Equipment ,	The subject items sourcing must be allowed from countries other than the mentioned four to Six Regions as the same is not that sophisticated to be procured only from 4 to 6 Region of the world. Please clarify and confirm.	Please follow the Bid document.	

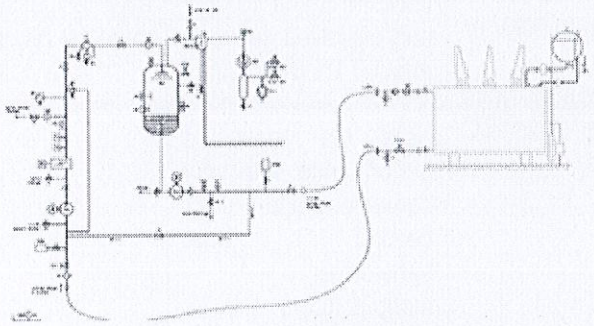
	Temporary Ground Rod at TL site, Mooring Chain, Head Lights, Handling Rung, Ladder for Tubular Pole, Tower Harness, Quad Box Ratchet Wrench			
32.	Volume 2 of 2, GTP Pressure Washer	Please clarify whether the desired equipment to operate for cold water Washing or Hot Water Washing of Insulators.	cold water Washing is acceptable.	
33.	Volume 2 of 2, GTP Oil Acidity Test Set	Here at Item no. 11 Temperature Range of -150 C to +250 C seems to be impractical. You may please review the same and give the correct range.	Temperature Range shall be from +5 to +50 C (Please see the addendum)	Y
34.	Volume 2 of 2, General	Some of the Equipment manufacturers have shifted their bases from EU to other parts of the World but manufacturing the same quality products as based on design and quality standards followed from parent plant. In such case, the equipment for those manufacturer should also be acceptable. Please clarify your position in this regard.	Please follow the Bid document.	
35.	Volume 2 of 2, General	Most of the equipment have a very standard manufacturing process with a compliance to the internationally acceptable standards. There may be a possibility that out of Several parameters asked in the GTPs some of the parameters may be complied as per acceptable standards and not in absolute value. We understand that in such condition the equipment shall not be rejected and shall be eligible for evaluation for acceptance. Please clarify your position in this regard.	Where tolerances are shown in the specifications, this indication must be respected.	

36.	Volume 2 of 2, GTP High Vacuum Transformer Oil Purifier	Flow Schematic **Required specifications:**  You will find below our typical flowchart since the proposed flowchart comes from the competition. These PIDs will be sent by email. Typical MAS 12000		Flow Schematic is sample Only and can change with the manufacturer.	



OIL PUMP		FOAM DETECTION	
VACUUM PUMP		VALVE WITH LATERAL CLEARING	
SAFETY VALVE		FILTER	
		DEGASIFICATION UNIT	
VALVE		CHECK VALVE	
ELECTRO VALVE		HEATER	
BY-PASS		THERMOSTAT	
SAMPLING VALVE		REGULATOR	
LEVEL SENSOR		SIDE LIGHT	
CLOGGING INDICATOR		PRESSOSTAT	

With Optional items MAS12000



37.	Volume 2 of 2, GTP High Vacuum Transformer Oil	**GTP sub-item**	**Required specifications**	**Bidder's Guaranteed Particulars**		
		Power	3 Phase 4 wire 440V ± 10 % 50Hz ± 10%	Please confirm this is	400V ± 10 %	Y

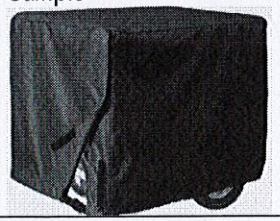
	Purifier	Supply		**440 V, 400 V or 380 V**		
		Capacities	Oil Flow rate 1000 to 1200 L/H (Litter per hours), Vacuum Pump L/m 3,500 or more, Mechanical Booster m3/h 1250/1500 or more.	Please double check the flow rate – we believe the requirement is for 10 000 to 12 000 l/h considering the requested flowrate of the vacuum group	1- (Typing Error) Capacity of oil flow rate is 10,000 to 12,000 L/H. Please follow the Addendum.	Y
		Guaranteed Performance	After 1 pass Water ppm tested by ASTDM D1533 up to 2 or less Gases (volume %) tested by ASTDM D2945 up to 0.05 or less Dielectric Strength [kV] tested by IEC156 up to 80kv or more After 3 pass Water ppm tested by ASTDM D1533 up to 1 or less Gases (volume %) tested by ASTDM D2945 up to 0.01 or less Dielectric Strength [kV] tested by IEC156 up to 90kV or more IEEE C57.106 meet or exceed the acceptance limits IEC 60422 meet or exceed the acceptance limits IEC 60296 meet or exceed the acceptance limits	Once in normal foaming conditions and incoming oil temperature of 45°C, clean oil will leave after one pass at a maximum temperature of 70 °C with a moisture content of between 5 and 10 ppm and dissolved gases of about 0.1% by volume. Note the requested performance are very demanding and are far beyond what transformer manufacturers recommend. Our proposed performance is more than sufficient for mineral oil.	It is for Initial value of water 50ppm Gas (Vol%) 10 Dielectric Strength (kV) 30 Depending on the condition/ contamination of the transformer oil, output performance can vary but after 3 passes it should meet the requirement.	
		Inlet, outlet, and bypass,	2" STAINLESS STEEL Ball Valve with Handle and CHROMIUM ABS Ball, Manual operation in addition	50 mm manual valve OK	Stainless steel is required for the life cycle of the unit.	

		vacuum valves	to automatic control.	(stainless steel not necessary with oil) Please delete Stainless steel.		
		Inlet Strainer	Replaceable 60 mesh screen	400 µm cleanable strainer (no consumable)	60 mesh is 250 µm. Inlet strainer will stay 60 mesh or equivalent unit. A 60 mesh/ 250 µm Cleanable strainer is also acceptable.	Y
		Pre-Filter	With 2 pcs of pleated paper cartridge type element 10 microns nominal rating	1 filter body with 1 single filter cartridge Better filtration grade than "10 µm nominal" : β4.5µm (c) =1000 according ISO 16889 11/07/03 according ISO 4406/ CEI 60422	Any filter that is equal or better than 10 microns is acceptable	
		Fine Filter	With 2 pcs of pleated paper cartridge type element 0.5 microns nominal rating, with pressure gauge and Pressure switch.	1 filter body with 1 single filter cartridge Better filtration grade than "0,5 µm nominal" : B1.5µm (c) =1000 according ISO 16889 08/04/02 according ISO 4406/ CEI 60422	Any filter that is equal or better than 0.5 microns is acceptable	
		Flow Control valve,	Diaphragm type hydraulically operated from pilot valve and liquid float located in the vacuum chamber.	This Technology from particular manufacturer –not applicable for every manufacturer. Please amend: Manual valve for flow control (automatic valve optional) and	Unit should operate automatically without attendant. Automatic operation of flow control value is required regardless the operating mechanism.	

				degassing chamber is fitted with flow regulation tube instead		
		Voltage Breakdown Analyzer	To test the outlet oil voltage breakdown test	It is an optional item and not part of purifier system. BOQ SL no. 53 is already in the list. We recommend to delete this point. It will increase the price.	It is built in on line breakdown voltage sensor.The supplier has to supply this part whether it is built in or as accessories of the purifier system.	
		Hoses 6 Each for oil circulation. 3 each for vacuum.	For transformer oil and vacuum extraction, non-clasp. 2"x10 feet with camlock male fitting on both ends, Anti- Static with built in static wire assists in dissipating static electricity. High operating temperature (-10 to +90 °C), operating pressure (Full vacuum to 150 PSI)	2 x 10 m for oil hoses as a standard Up to 100°C Set of 6 x 10 m with additional 2 m oil hoses for online treatment option.	All hoses are required, it's not an optional requirement. Please follow the addendum.	Y
		Fittings 6 Each type for different transformers 1. Female to hose. 2. Male to Hose 3. Male to outer threads 4. Female to outer threads. 5. Male to inner Female to inner threads. 6. Hose		Clarifications on fitting type, diameter, flange diameter and thread type to be confirmed and clearly mentioned (avoiding misunderstanding)	All fitting are Camlock to 2" NPT male and female or as explained. Flanges are 2" Camlock - 150# flange adapter	

		coupler 7. Vacuum flanges. 8. Blinds (covers for different fitting) 9. Fitting storage box.				
		Environmental Conditions	Working in any weather condition, weather proof (rain, hot, cold, snow, windy, fogy, humid, etc.)	Assumed for hot and humid conditions (including heavy rain). No snow or cold conditions to foresee in Bangladesh.	Heavy Duty Woven Poly Tarp or similar material to protect the equipment when not in service	
		Weather proof Cover	Removable weather proof hard plastic cover	Item 7 mention "liftable side cover" on road trailer: hard cover? However, in this item, it is mentioned plastic cover Type of protection (tarpaulin/hard cover) to be clearly defined	These are part of the trailer metallic side covers	
38.	Volume 2 of 2 GTP Vacuum Pump System for Transformers	**GTP sub-item**	**Required specifications**	**Bidder's Guaranteed Particulars**		
		Power Supply	3 Phase 4 wire 440V ± 10 % 50Hz ± 10%	Please confirm this is **440 V, 400 V or 380 V**	400V ± 10 %	Y
		Guaranteed Performance	IEEE C57.93 clause 4.8.2 Vacuum treatment. Meet or exceed the acceptance limits IEEE C57.140 clause 7.1.2. a-2	Please give details of the mentioned clauses and their associated performance We assume that PGCB	1 mmHg or equivalent unit in 2 to 3 hours. Please follow the Bid document.	

				should mention clearly the expected performance (we need some metrics here)		
		Connection	2 inches flange to hose	Camlock connection with 2" flange adapter OK for vacuum The camlock connection enables the connection of various flange adapters for more flexibility depending on transformer flange dimensions	Please follow the Bid document.	
		Hoses 3 Each for vacuum.	For transformer vacuum extraction, non-clasp. 2"x10 feet with flange fitting on both ends, Anti-Static with built in static wire assists in dissipating static electricity. High operating temperature (-10 to +90 °C), operating pressure (Full vacuum)	2 x 10 m for oil hoses as a standard Up to 100°C	Please follow the addendum.	Y
		Fittings 6 Each type for different transformers. Vacuum hose flanges. Blinds (covers for different fitting) Fitting storage box.		Clarifications on fitting type, diameter, flange diameter and thread type to be confirmed and clearly mentioned (avoiding misunderstanding)	All fitting are Camlock to 2" NPT male and female or as explained.	
		Onsite training	On-site training on a working transformer with unacceptable oil quality and DGA.	Please clarify what is meant by "unacceptable oil quality and DGA".	In service or out of service transformer with Initial value of water content 50ppm or more	

				The purpose of the vacuum group is to vacuum the moisture in empty transformer isolation. We would like to understand why they mention oil in this specific item.	Gas (Vol%) 10 or more Dielectric Strength (kV) 30 or less	
		Environmental Conditions	Working in any weather condition, weather proof (rain, hot, cold, snow, windy, fogy, humid, etc.)	Assumed for hot and humid conditions (including heavy rain). No snow or cold conditions to foresee in Bangladesh. We believe this is a copy/paste from competitor typical specs.	Please follow the Bid document.	
		Weather proof Cover	Removable weather proof hard plastic cover	Please clarify if hard cover or tarpaulin is expected.	It shall be hard plastic cover.Please see the Sample 	
39.	Volume 2 of 2 GTP Vacuum/Pressure Gauge for Transformer Drying	**GTP sub-item**	**Required specifications**	**Bidder's Guaranteed Particulars**		
		Measurement range	1200 mbar to 5E-4 mbar	100–1 · 10^{-3} mbar	1200 mbar to 0.01 mbar	Y

				(5E-4 mbar will never be achieved with the vacuum group such precision is not required)		
		Resolution	1200 -1000 mbar: 1 mbar 1000 – 1 mbar: 0.1 mbar < 1 mbar: 2 digits mantissa, 1 decimal place	1 mbar (100–10 mbar) 2 digits (< 10 mbar)	follow the bid document	
		Materials in contact with vacuum	SS1.4307, gold, nickel, tungsten, glass, FKM	SS 1.4305, nickel, tungsten, glass.	your proposal is accepted	
40.	Volume 2 of 2 GTP Portable Partial Discharge (PD) Diagnostic System for High Voltage Equipment	**GTP sub-item**	**Required specifications**	**Bidder's Guaranteed Particulars**		
		HFCT	0.5MHz-30MHz	1.2 – 40 MHz Note: High Frequency Current Transformer (HFCT) is utilized for cable Partial Discharge (PD) measurement, and typically, the cable PD is measured at high frequencies. Please make it more flexible range	your proposal is accepted. Please follow the addendum.	Y
		TEV	3MHz to 100MHz	2 MHz to 80 MHz. Please make it more flexible range	your proposal is accepted. Please follow the addendum.	Y
		Acoustic	30kHz-300kHz	100kHz to 450 kHz Note: For Acoustic PD measurement of	your proposal is accepted. Please follow the addendum.	Y

				transformers, the ideal frequency range is 100kHz to 450kHz. This is because lower frequency bands are susceptible to background noise, which can affect the accuracy of the measurement. Please make it more flexible range		
		Rugged PC (Minimum Requirements	**Operating System**: Windows 10 Pro with upgrade for W11 **Mobile Computing Platform:** Intel® Core™ i5-1145G7 vPro® Processor, Max. 4.4GHz with Intel® Turbo Boost Technology, 8MB Intel® Smart Cache **VGA Controller**: Intel Iris X Graphics. **Display**: 14" TFT LCD HD (1366 x 768), Protection film **Storage & Memory**:16 GB DDR4 512GB PCIe NVMe SSD **Keyboard**: LED backlit membrane keyboard **Pointing Device**: Touchscreen, Touchpad **I/O Interface** Audio in/out combo x 1, DC in Jack x 1, USB 2.0 x 1, USB 3.2 Gen 2 Type-A x 2, Thunderbolt™ 4 Type-C x 1 LAN (RJ45) x 1, HDMI 2.0 x 1, Docking connector x 1. **Security Features**: TPM 2.0, Kensington lock, vPro® Technology **Communication Interface**: 10/100/1000 base-T Ethernet, Wi-Fi 6 AX201,	The instrument has an onboard display available; hence, an industrial laptop is not required. If the customer requires the laptop, then a standard laptop will be provided. This is a particular manufacturer spec. Please make it generalize.	your proposal is accepted. Latest standard laptop with required specifications will be acceptable.	

			02.11ax, Bluetooth (v5.2), 4G LTE mobile broadband with integrated GPS **Power:** AC adapter (90W, 100-240VAC, 50/60Hz) with Bangladesh plug, Li-ion battery (10.8V, typical 6900mAh; min. 6600mAh), 2nd battery (10.8V, typical 6900mAh; min. 6600mAh). **Rugged Features**:MIL-STD-810H certified, IP53 certified, splash resistant keyboard, Vibration & 3ft (0.9m) drop resistant, Sealed ports and connectors. Shock-protected removable SSD. **Environmental Specifications**: ***Temperature:*** Operating: -29°C to 63°C / -20°F to 145°F Storage: -51°C to 71°C / -60°F to 160°F **Humidity**: - 95% RH, non-condensing			
41.	Volume 2 of 2 GTP Sweep Frequency Response Analyzer (SFRA)	Accuracy	±0.1 dB from +10dB down to -40dB, ±0.5dB down to -140dB Minimum	±0.1 dB from +10dB down to -40dB, ±0.5dB down to -100dB. **Please make it generalized.**	Your proposal is accepted. Please follow the addendum.	Y
42.	Volume 2 of 2 GTP Current and Voltage Transformer Test Equipment	Features	Voltage output 0-2500V@ 1.2A, Voltage reading 100mV ±0.2%, 1V ±0.1%, 50V ±0.1%, 1000V ±0.1%, Current reading, 0 to 1.9999 A RMS ± 0.5%, Ratio and accuracy, 0.5 to 10000:1 ±1% Phase angle, ±180 Degrees / 0.0 to 359.9 degrees ±1 degree	Output Voltage 0 to 2/10/50/300 V AC/DC with 1 Amps & output power: 300 VA Accuracy: ±0.02% Current: 0 to 1.0 A Current accuracy ±0.08%. Ratio measuring range 0.8 to 2000 with accuracy of 0.02%, 2000-5000 with accuracy of 0.03% &	Output voltage less than 2500 volts is not acceptable.	

			Winding resistance, 0-1.9999 ohms ± 1%, 2-19.999 ohms ± 1% Insulation resistance 2M to 1G-ohms ± 3% Current source 0-20A @ 20VAC Cont. Load burden display 19.999 A rms ±1% / 19.999V rms ±1% / 400VA / Z:1mΩ-1kΩ Data storage Up to 200 files with up to 10 excitations curves per file	5000-20000 with accuracy of 0.05%. VT Ratio measurement range 1- 2450 with accuracy of +\-0.05 %. Phase angle measurement 0-360 deg with accuracy of ±3 mins typical. Winging resistance measurement range 0.01 to 30 ohms with 1% accuracy. Insulation resistance range: 0-20 G ohm. 0-60A 5A 1000 test results and saturation curves		
			Test plans Up to 100 test plans Display) bright color LCD display Printer 40 characters, commercial thermal paper PC connection USB, RS-232C,	OK. NA.	If no built in printer, provide an external portable printer with required software.	

			USB memory stick Software included Memory Stick 100 MB+ Approvals EN 61010:2001, EN 61326-1:1997 Class A Heavy duty Extra-durable carrying case with handle and wheels All tests, Single Test Sequence Automatic & Manual Modes Automatic & Manual demagnetizing Automatic knee point detection (ASA 10/50, IEEE 30°, IEEE 45°) Includes 5 low side taps and 1 high side tap Full Keypad	OK. USB/Ethernet ports for connecting with external PC/Laptop. Portable Microprocessor controlled fully automatic Multi tap (suitable up to 5 taps simultaneous) CT & VT analyzer. With the functions of CT ratio measurement, polarity, CT secondary resistance measurement, inbuilt Demagnetization, Excitation characteristics plot, CT secondary connected (circuit) burden testing, CT insulation resistance, VT Ratio, VT Winding Resistance & demagnetization.		
		Environmental Conditions	-10 to 60°C,	Operating -10° C to 50° C	Please follow the addendum.	Y
43.	Volume 2 of 2	Range	Input impedance 10 MΩ between P-P and P-N, 5	It is from a particular	Voltage range : 1000.0 V	Y

	GTP Harmonic & Power Quality Analyzer		MΩ between P-PE and N-P Current Inputs 3 phases and neutral with clamps with 15 mV output or Rogowski Coil 15 mV input impedance 11 kΩ Bandwidth DC to 30 kHz	manufacturer. Please make it generalize.	rms or DC, Transient measurement 2.200 kV peak Current range: 50.000 mA AC to 5.0000 kA AC, 10.000 A DC to 2.0000 kA DC. Please follow the addendum.	
		Features	● **Display** TFT, 1024 x 600 pixels with capacitive touch that supports operation with PPE gloves user configurable ● **Voltage source measurement** 0 to 1000 volts 3 phases and neutral, input impedance 10 MΩ between P-P and P-N, 5 MΩ between P-PE and N-P **Current Inputs** 3 phases and neutral wit clamps with 15 mV output or Rogowski Coil 15 mV input impedance 11 kΩ	Display: Backlit 11.5 cm x 8.5 cm color VGA, Resolution 5.56 pixels per mm (640 x 480 pixels, 115.2 x 86.4 mm), Refresh rate: 1-3 sec It is from a particular manufacturer. Please make it generalize.	It will be a TFT digital display. Power range: 50.000 W to 6.0000 MW Please follow the addendum.	Y
			● **Bandwidth** DC to 30 kHz ● **Measurement** IEC 61010-2-030: Overvoltage CAT IV 300 V, CAT III 600 V ● **Real-Time Accuracy** <1 ms absolute to UTC	Bandwidth: Not available. It is from a particular manufacturer. Please make it generalize. **<u>Measurement:</u>** IEC61000-4-7 IEC61000-4-30 (Class A) IEC61000-4-15 IEC61000-4-27 IEC61010-1 IEC61326 IEC60529 MIL-STD-	This is the measuring range of frequency and it is required.	

			• **Events, Voltage** Dip, swell, interruption, rapid voltage change, waveshape deviation, transients **Current** Inrush current • **Triggered Recordings** Half cycle RMS of voltage and current for 10 s • **Transients** 1 MS/s • **Ethernet** 1 Gbit/s 1000BASE-T • **USB** 2.0 high speed for USB flash drives to transfer measurement data, firmware updates, and license installation	810-G IEEE1453 CAN/CSA-C22.2 No. 1010.1- 92 RoHS2 Directive 2011/65/EU IEEE1459 AC voltage accuracy: 0.1% per IEC61000-4-30 DC voltage accuracy: ±0.2% of full scale ±2 Vdc **Events, Voltage:** Dip, swell, interruption, rapid voltage change, waveshape deviation, transients, **Current** Inrush current As per IEC61000-4-30 (1 m sec) (±2697 V) USB, Ethernet		
44.	Volume 2 of 2 GTP Transformer Turns	Turn Ratio	≤±0.2%	Accuracy varies for different range of voltage and excitation.	≤±0.2% (up to 2 kV)	Y

	Ratio Tester			Step Down Excitation 25-48V ±0.05% 0.8 - 1000 ±0.10% 1001 - 2000 ±0.30% 2001 - 15000 ±1% 15001 – 50000 1-24V ±0.10% 0.8 - 1000 ±0.20% 1001 - 2000 ±0.60% 2001 - 15000 Step Up Measurement 25-250V ±0.05% 0.8 - 200 (most Power Tx) 1-24V ±0.10% 0.8 - 200		
45.	Volume 2 of 2 GTP Circuit Breaker and Coil Analyzer Test Set	Test current	100 mA or more	**25mA at 10 ohm.** Test current depends on the PIR value. Our manufacturer have a patented method of canceling out the effect of capacitively coupled interference currents to get results with highest accuracy even on lower test currents.	It can be accepted but the suppliers are requested to maintain the accuracy as mentioned in the GTP.	
		Coil current accuracy	±1% of reading ± 0. 1% of range	**±2% of reading ± 0. 1% of range**	Follow the Bid Document.	
		Under voltage trip testing	To be Mentioned	**Possible using additional external accessory which will increase price. We suggest to delete this**	Supplier has to mention whether this feature is available or not.	

				point.		
		Minimum pickup volt. testing	To be Mentioned	**Possible using additional external accessory which will increase price. We suggest to delete this point.**	Supplier has to mention whether this feature is available or not.	
		Static & Dynamic Resistance Measurement Resolution	0.1μΩ	**1 μΩ.** **Please generalize this.**	**1 μΩ accepted**	Y
46.	Volume 2 of 2 GTP Handheld Micro Ohm Meter	Accuracy	±0.1 % of reading ±0.1of range up to 1Ω Range ±0.5 % of reading ±0.5 of range from 1Ω to 3Ω Range	0 – 1999 μΩ ±1 % of reading ±1 digit 2 – 500 mΩ ±2 % of reading ±1 digit 500 – 1000 mΩ ±4 % of reading ±1 digit Please generalize this.	Please follow the Bid document.	
		Resolution	1-999.9 μΩ 0.1 μΩ 1.000-9.999 mΩ 0.01 mΩ 10.00-99.99 mΩ 0.1 mΩ 100.0-1000 mΩ 1.0 mΩ	1-999.9 μΩ 1 μΩ 1.000-9.999 mΩ 10.00-99.99 mΩ 100.0-1000 mΩ 1.0 mΩ Please generalize this.	Please follow the Bid document..	
		Test current range **Accuracy**:	±2% ±2 A	50/100A range accuracy cannot comply as we already specify in resistance accuracy	For low resistance micro ohm meter, 100 A DC test current is a requirement.	
		Test Modes	Manual, Auto, Continuous.	Auto mode. Please generalize this.	Please follow the addendum.	Y

47.	Volume 2 of 2 GTP AC/DC Power Supply for Testing Circuit Breakers	Features	• USB port for data acquisition via USB drive • Computer/printer interface.	No USB port & Printer interface Please generalize this.	Please follow the addendum.	Y
48.	Volume 2 of 2 GTP Sf6 Gas Analyzer Test Set	**Measuring parameters**	SF6 volume percentage (%), Moisture concentration, SO2 concentration (ppm), HF concentration (ppm), H2S concentration (ppm), CO concentration (ppm) With pumping back feature after analysis. Inlet pressure: 0,2 - 50 bar Flow rate: 20 L/h (SF6) or better 6 m long connecting hose with DN8 and DN20 couplings, 2 m long connecting cable	complied in all features except inlet pressure 0.2-35 bar **Please generalize this.**	0.2 - 35 bar or higher is required. Please follow the addendum.	Y
49.	Volume 2 of 2 GTP Battery Load Test Set	Constant P (max.)	Range: 0 to 20 KW Inaccuracy: +/- 1 % Resolution: 10W	Range: 0 to 15 KW Inaccuracy: +/- 1 % Resolution: 10W **Please generalize this.**	For higher ampere hours battery, 20 KW is required.	
		Power (max.)	0 to 20 KW	0-15KW	Follow the Bid Document	
50.	Volume 2 of 2 GTP Online DGA Test Kit	Power Supply	Single Phase 230V ± 10 % 50Hz ± 10% for Vacuum/Filling pump	Comply (for Vacuum/Filling pump relevance is not clear and need clarification)	Ignore the Vacuum/ filling pump power supply, it is internal to the unit. Please follow the addendum.	Y
		Measuring methods	Optical measurement, Photo-acoustic spectroscopy (PAS), Fourier Transform Infra-Red (FTIR) Any of above	Near-infrared gas sensor unit (optical measurement method) for CO, CO2, C2H2, C2H4, C2H6, CH4 and C3H8 Micro-electronic gas sensor for H2, O2 and	Please follow the Bid document.	

				N2 Thin-film capacitive moisture sensor for H2O measurement Please generalize this.		
		Gas in Oil Measuring Range	Hydrogen (H2) : 5 - 5,000 ppm Methane (CH4) : 0 – 10, 000 ppm Ethane (C2H6) : 0 – 10, 000 ppm Ethylene (C2H4) : 0 – 10, 000 ppm Acetylene (C2H2 : 0 – 5, 000 ppm Carbon monoxide (CO) : 0 – 10, 000 ppm Carbon dioxide (CO2) : 0 – 10, 000 ppm Moisture) (H2O) : 0 – 100 ppm	(H2) : 0 - 10,000 ppm (CH4) : 0 – 10,000 ppm (C2H6) : 0 – 10,000 ppm (C2H4) : 0 – 10,000 ppm (C2H2 : 0 – 10,000 ppm (CO) : 0 – 10,000 ppm (CO2) : 0 – 20,000 ppm (H2O) : 0 – 100 ppm Additional: (C3H6): 0 - 5000ppm (O2): 0 - 50,000 ppm (N2) : 0 - 150,000 ppm	Your proposed range are acceptable	
		Communication & Data	RS-485, Model bus RTU, USB, Ethernet, DNP3, IEC 61850	RS-485 Ethernet (copper or fibre) MODBUS RTU/ASCII/TCP DNP3.0 or IEC61850 No USB. Please generalize this.	Acceptable without USB port but RS-485 Ethernet, MODBUS are required.	
		Mounting	Stainless steel AISI 316 (OPTPSU) weather proof encloser	Aluminum alloy based weatherproof enclose.	Aluminum alloy is also acceptable	

				Please generalize this		
		DGA interpretation methods	IEC, IEEE, CIGRE, Key Gas Method, Rogers Ratio, Doenenburg Ratio, Duval Triangle Method, and Duval Pentagon Method	IEC, IEEE, CIGRE – by configurable alarms Rogers Ratio, Duval Triangle Method, and Duval Pentagon Method – comply and available on board without needing a computer Key Gas Method, Doernenburg Ratio – not implemented yet. Please generalize this.	Acceptable without Doenenburg Ratio. All other interpretation methods should comply	Y
51.	Volume 2 of 2 GTP Three Phase Automated Transformer Test Set	2.2.1	Three phase automated testing of transformer turns ratio. Transformer turns ratio (TTR) measurements to verify the operating principle of a power transformer to detect shorted turns and open circuited conditions. To perform this test with up to 12kv voltage all required accessories shall be supplied.	TTR: 2500:1 – 1:25 000, Accuracy: 0.07% Voltage range: 0 to 2200VAC This data from a particular manufacturer. Please generalize this. The test set should be able to test Large Power transformers for turn-ratio, excitation current, winding resistance, Inbuilt	Please follow the Bid document.	

				demagnetization with capability to measure % remanence before and after demagnetization, Dynamic OLTC includes measurement of Timing and resistance of transient resistor testing each tap, Excitation Current from HV & LV winding, Short circuit impedance, magnetic balance test, Frequency Response of Stray Losses, Capacitance and tan delta test etc. **<u>Capacitance & TAN DELTA:</u>** 1. V: 0-12 kV AC and above. 2. Continuous at 45 to 70Hz Max. 3. 250 V between 1-505 Hz for Narrow band DFR. 4. Resolution: 1V.		
		2.2.2	Three phase automated testing of power transformer exciting current. Exciting current measurements are performed to assess the turn-to-turn insulation of the windings, the	Voltage range: 0 to 2200VAC This data from a	Please follow the Bid document.	

			magnetic circuit of a transformer as well as the tap changer. To perform this test with up to 12 kV voltage all required accessories shall be supplied.	particular manufacturer. Please generalize this. The kit shall be able to measure, record and display the per-tap measurements of turns-ratio, errors of ratio & phase angles and excitation current to avoid manual recording of the test results. There should not be any limitation of the number of taps (minimum of 17 taps) which can be measured. The deviation from nominal ratio for each tap shall be displayed **<u>Capacitance & TAN DELTA:</u>** V: 0-12 kV AC and above. Continuous at 45 to 70Hz Max. 250 V between 1-505 Hz for Narrow band DFR. Resolution: 1V.		

		2.2.6	Automated testing of transformer short circuit impedance / leakage reactance. Leakage reactance / short-circuit impedance measurement to assess possible deformation or displacements of windings.	The test kit shall be able to measure short-circuit impedance (Leakage Reactance), Magnetic balance & Frequency Response of Stray Loss of power transformers. Without any additional unit. h) The same system should also be capable of measuring excitation current of large transformers on both HV & LV winding. This data from a particular manufacturer. Please generalize this.	Please follow the Bid document.	
		2.2.8	Automated testing of transformer demagnetization. Demagnetization of the core after DC application, (e.g. during winding resistance tests) to avoid the risk of high inrush currents during energization and to reduce influences on other tests.	The Instrument should demagnetize the transformer in less than 5 minutes & calculate % remanence present before and after the demagnetization of transformer with live plotting of BH curve. Please generalize this.	Please follow the Bid document.	
		2.3.3	Current Outputs Model Channels: 3 3 Phase: 3 x 33 A AC @ 40 V	0-800A/6V AC 100A/50V DC	Please follow the Bid document.	

			3 x 33 A DC @ 56 V 1 Phase: 1 x 100 A DC @ 56 V 1 x 33 A DC @ 170 V Frequency: 15 Hz … 599 Hz Power: 4.000 W (for 30 sec.) 2.400 W (continues)	Please generalize this.		
		2.3.5	Voltage Output Model • Channels: 3 • 3 Phase: o 3 x230 V AC (L-N) / 400 V AC (L-L) @ 100 mA • 1 Phase: O 1 x 240 V AC @ 16 A O 1 x 340 V DC @ 16 A • Frequency: 15 Hz … 599 Hz : O4.000 W (for 30 sec.) O2.400 W (continues)	2200V/1A AC (1 min.) 250V/10A AC Auxiliary Voltage 0-300V DC Please generalize this.	Please follow the Bid document.	
		2.5.1	Voltage Output Model• Channels: 3 •3 Phase: o 3 x230 V AC (L-N) / 400 V AC (L-L) @ 100 mA • 1 Phase: O 1 x 240 V AC @ 16 A O 1 x 340 V DC @ 16 A •Frequency: 15 Hz … 599 Hz • Power:4.000 W (for 30 sec.) O2.400 W (continues)	4 x 0 to 10Amps AC & DC 2 x 50 V DC (R1 & R2) Accuracy: ≤0.2% of reading + 0.2% FS Resolution: 1µA Please generalize this.	Please follow the Bid document.	
		2.5.2		4x 250/350 V AC & DC 2 x 50 V DC (R1 & R2)	Please follow the Bid document.	

<table>
<tr><td></td><td></td><td></td><td></td><td>Please generalize this.

Accuracy: ≤0.2% of reading + 0.2% FS

Resolution: 1µA</td><td></td><td></td></tr>
<tr><td></td><td></td><td>2.5.3</td><td></td><td>Please generalize this.

1 A generator: 10 mΩ – 10 kΩ
16 A generator: 0.63 mΩ – 33.3 Ω
100 A generator: 0.1 mΩ – 2.5 Ω

Accuracy: 0.15 % RD + 0.15 % FS</td><td>Please follow the Bid document.</td><td></td></tr>
<tr><td></td><td></td><td>2.7.1</td><td><table><tr><td>Range</td><td>Accuracy3</td></tr><tr><td>1:1 ... 10
1:10 ... 100
1:100 ... 1000
1:1000 ... 10 000</td><td>0.03 % rd + 0.043 % range
0.027 % rd + 0.043 % range
0.027 % rd + 0.043 % range
0.027 % rd + 0.043 % range</td></tr></table></td><td>2500:1 – 1:25 000
Accuracy: 0.07 %

Please generalize this.</td><td>Please follow the Bid document.</td><td></td></tr>
<tr><td>52.</td><td>Volume 2 of 2
GTP
Multi-Functional Primary Test System for</td><td>3.2.6</td><td>IEC 61850 sampled value testing</td><td>Not available. Please generalize this.</td><td>Please follow the Bid document.</td><td></td></tr>
<tr><td></td><td></td><td>3.3.3</td><td>Dynamic load tap changer diagnostics (on load tap changer test) with up to 100A DC</td><td>0-16A DC

Please generalize this.</td><td>Please follow the Bid document.</td><td></td></tr>
</table>

	Substation Commissioning and Maintenance	3.3.8	Transformer bushing: power/dissipation factor + insulation capacitance with up to 12kV/15kV, 300mA and frequency from 15Hz to 400Hz	Transformer bushing: power/dissipation factor + insulation capacitance with up to 12kV, 500mA and frequency from 1Hz to 505Hz	Please follow the Bid document.	
		3.3.9	Insulating fluids: power/dissipation factor + insulation capacitance with up to 12kV/15kV, 300mA	Insulating fluids: power/dissipation factor + insulation capacitance with up to 12kV, 500mA	Please follow the Bid document.	
		3.3.10	Excitation current per tap with up to 12kV/15kV, 300mA	Excitation current per tap with up to 12kV, 500mA with TDX unit and upto 2.2kV with main unit.	Please follow the Bid document.	
		3.4.1	Line impedance and k-factor with up to 100A	Up to 10A. Please generalize this. line impedance measurement is to determine the line model's parameters. In line model using symmetrical components these parameters are defined by zero sequence impedances Z1 and Z0, and they are used for calculation of the k-Factors.	Please follow the Bid document.	
		3.4.2	Mutual coupling with up to 100A	Kit should have Seven different test set-ups	Please follow the Bid document.	

				have to be measured each set-up, testing is done at two frequencies other than power frequency to allow power frequency interference to be effectively suppressed. The results will be shown at power frequency by interpolation of the measured points.		
		3.4.3	Positive or zero sequence impedance	Multifunction test kit should have inbuilt source 10A, 250V in order to measure line impedance parameter and K factor. The kit should have output current up to 10 amps with output voltage should up to 250 V and impedance range 20 mΩ – 5 kΩ	Please follow the Bid document.	
		3.6.1	Contact resistance with up to 400A DC	**Three phase Circuit breaker Contact resistance up to 100 Amps.** Please generalize this.	Please follow the Bid document.	
		3.7	**GIS Testing**			
		3.7.1	Withstand test up to 235kV (max 1.6nF). HV source for partial discharge measurements with up to 235V	Not available. Please generalize this.	Please follow the Bid document.	

			(max 1.6nF)			
		4.3.2	Voltage range: 0 to 800A AC at 6.0V (V_{max}), 4800VA ($Power_{max}$) for 25s	Current range:	Please follow the Bid document.	
			Voltage range: 0 to 400A AC at 6.4V (V_{max}), 2560VA ($Power_{max}$) for 8 min.	0-800 A/6 V, 1 min 0-200 A/10 V, >2 h Frequency range: 45-70 Hz Please generalize this.	Please follow the Bid document.	
			Voltage range: 0 to 200A AC at 6.5V (V_{max}), 1300VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
			Frequency range: 15Hz to 400Hz	1Hz- 505Hz	Please follow the Bid document.	
			Amplitude reading error < 0.10%	0.2% of reading + 0.2% FS Please generalize this.	Please follow the Bid document.	
			Amplitude full scale error < 0.10%		Please follow the Bid document.	
			Phase full scale error < 0.10°		Please follow the Bid document.	
		4.3.3	AC: 0 to 6A	0-10A	Please follow the Bid document.	
		4.3.4	Voltage range: 55V (V_{max}), 330VA ($Power_{max}$) for >2hr	2.2kV ac,2500VA, >2hr	Please follow the Bid document.	
			Frequency range: 15Hz to 400Hz	5-70Hz	Please follow the Bid document.	
		4.3.5	AC: 0 to 3A	NA. Please generalize this.	Please follow the Bid document.	
		4.3.6	Voltage range: 110V (V_{max}), 330VA ($Power_{max}$) for >2hr	NA. Please generalize this.	Please follow the Bid document.	
			Frequency range: 15Hz to 400Hz		Please follow the Bid document.	
		4.3.7	DC: 0 to 400A	0-100A DC. Please generalize this.	Please follow the Bid document.	

			Voltage range: 0 to 400A DC at 6.5V (V_{max}), 2600VA ($Power_{max}$) for 2 min.		Please follow the Bid document.	
			Voltage range: 0 to 300A DC at 6.5V (V_{max}), 1950VA ($Power_{max}$) for 3 min.		Please follow the Bid document.	
			Voltage range: 0 to 200A DC at 6.5V (V_{max}), 1300VA		Please follow the Bid document.	
			($Power_{max}$) for >2hr	0.1% of reading + 0.1% FS.	Please follow the Bid document.	
			Amplitude reading error < 0.20%	Please generalize this.	Please follow the Bid document.	
			Amplitude full scale error < 0.05°		Please follow the Bid document.	
		4.3.8	DC: 0 to 6A		Please follow the Bid document.	
		4.3.9	Voltage range: 60V (V_{max}), 360VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
		4.4.1	AC: 0 to 2kV	0-2200V AC 1 A, 1min	Please follow the Bid document.	
		4.4.2	Current range: 0 to 2kV AC at 1.25A (I_{max}), 2500VA ($Power_{max}$) for 1 min.	0.2 A, >2 h 2500 VA (max) Frequency range: 5-70 Hz	Please follow the Bid document.	
		4.4.3	4.4.3Current range: 0 to 2kV AC at 0.5A (I_{max}), 10004.4.4VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
		4.4.4	Current range: 0 to 1kV AC at 2.5A (I_{max}), 2500VA ($Power_{max}$) for 1 min.	250V AC 0 A, 1min 20 A, max 10 s 2.5 A, >2 h Frequency range: 5-505 Hz	Please follow the Bid document.	
		4.4.5	Current range: 0 to 1kV AC at 1.0A (I_{max}), 1000VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
		4.4.6	Current range: 0 to 500V AC at 5.0A (I_{max}), 2500VA ($Power_{max}$) for 1 min.		Please follow the Bid document.	
		4.4.7	Current range: 0 to 500V AC at 2.0A (I_{max}), 1000VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
		4.4.8	Current range: 0 to 130V AC at 3.0A (I_{max}), 390VA ($Power_{max}$) for >2hr		Please follow the Bid document.	
		4.4.9	Frequency range: 15Hz to 400Hz	0.2% of reading + 0.2% FS	Please follow the Bid document.	
		4.4.10	Amplitude reading error < 0.20%		Please follow the Bid	

				Please generalize this.	document.	
		4.4.11	Amplitude full scale error < 0.05%		Please follow the Bid document.	
		4.4.12	Phase full scale error < 0.20°		Please follow the Bid document.	
53.	Volume 2 of 2 GTP Voltage Transformer Testing, Calibration and Assessment	2.11	Used measuring voltages: up to 4kV	2KV, DC excitation technique for testing CTs with knee points up to 30 kV. Please generalize this.	Please follow the Bid document.	
		4.1.7	Maximum number of units of complete test set not exceeding 2 (two)	One	Please follow the Bid document.	
		4.1.8	Maximum weight of each unit should be 8kg (without accessories and transport case)	One unit. Weight 16.7 kg.	Please follow the Bid document.	
		4.3.1	**IVT and CVT basic testing**			
			Typical accuracy for phase measurements: 0.7 min	+/-3 min typical. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 2 min for voltage level: 0.6kV to 35kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
		4.3.2	**Inductive voltage transformers**	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 2 min for voltage level: 0.6kV to 35kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 3 min for voltage level: 35kV to 123kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement		Please follow the Bid document.	

			measurement ≤ 4 min for voltage level: more than 123kV (line to line)			
		4.3.3	**Capacitive coupled voltage transformers**	>30 kV to 800 kV ±0.07% typical ±0.15%maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for ratio measurement ≤ 0.05% for voltage level: 30kV to 100kV (line to line)		Please follow the Bid document.	
			voltage level: 100kV to 500kV (line to line)		Please follow the Bid document.	
			Typical accuracy for ratio measurement ≤ 0.09% for voltage level: more than 500kV (line to line)	>30 kV to 800 kV ±0.07% typical ±0.15%maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 2 min for voltage level: 30kV to 100kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 3 min for voltage level: 100kV to 500kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
			Typical accuracy for phase displacement measurement ≤ 4 min for voltage level: more than 500kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	
		4.3.3	Typical accuracy for phase displacement measurement ≤ 2 min for voltage level: 30kV to 100kV (line to line)	±3 min typical ±6 min maximum. Please generalize this.	Please follow the Bid document.	

54.	Volume 2 of 2 GTP PORTABLE REFERENCE STANDARD METER CLASS 0.05 & POWER QUALITY ANALYZER	Inputs	3 x voltage 3 x current (direct) 1 x Clamp-on CT current input IN/IE 2 x Clamp-on CT current input I1, I2, I3 for connection of: 3 x 100A Clamp-on CT 3 x 1000A Clamp-on CT 3 x 3000A FLEX 3000 current sensor input 1 input for 3 current sensors in high voltage networks 1 input for 3 high voltage sensors 2 Frequency / Scanning head input (one configurable as pulse output) 1 USB input 1 ETHERNET 1 Analogue modem 1 GSM modem (Option)	No analog modem and GSM modem as they are obsolete technologies now. Please delete it. Built in web server for remote display of graphical user interface and remote control of the unit • Data transfer and communication via USB (Type B), ETHERNET or WLAN	Any alternative to analog modem is acceptable.	Y
55.	Volume 2 of 2 GTP Online DGA Test Kit	The required measurement method is Optical measurement, Photo-acoustic Spectroscopy (PAS) as reflected within GTP serial number 7. Whereas item 55 DGA test kit requires Gas Chromatography measurement method. Gas Chromatography (GC) has two advantages over Photo-acoustic Spectroscopy (PAS). Firstly, accuracy is much higher. Secondly, PAS gives result in 18 minutes. Whereas GC gives result in 2 minutes only. Also, rightly item 55 DGA test kit requires Gas Chromatography measurement method. Please amend measuring method of online DGA test kit as Gas Chromatography (GC) or at least PAS/GC.		Item 55 is LAB test equipment with high accuracy using gas chromatography (GC). Online DGA test equipment is not for Lab use. It is for online monitoring of DGA for transformers without any consumable carrier gas. Optical measurement, Photo-acoustic spectroscopy, Fourier Transform Infra-Red or similar methods are acceptable. Gas Chromatography method is not acceptable for this item due to	

					consumable carrier gas	
56.	Volume 2 of 2 GTP Vacuum/Pressure Gauge for Transformer Drying	Document Requirements	Manufacturer's Valid ISO Certificate	All the manufacturer doesn't have ISO Certificate. In fact, many qualified American manufacturer do to adhere to ISO. They follow ASTM/ANSI/OSHA standard as obligatory govt regulations.	International Organization for Standardization (ISO) that help organizations to ensure they meet customer and other stakeholders needs within statutory and regulatory requirements related to a product or service, whereas, the referred standard by the supplier is for Testing and Materials, international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. As such, the suppliers are requested to submit ISO/equivalent certificates in this regard.	
57.	Volume 2 of 2 GTP HARMONIC & POWER QUALITY ANALYZER	5. Power Supply	Single Phase 230V +/- 10% 50Hz +/- 10% for vacuum/Filling pump	This parameter is not relevant for this item. Please delete.	Typing error, corrected in the Addendum.	Y

58.	Volume 2 of 2 GTP CIRCUIT BREAKER AND COIL ANALYZER TEST SET			According to the GTP you requested Circuit breaker and coil analyzer for this item, Qty: 08 nos. However, the same quantity i.e. 08 nos. coil analyzer is required against item#12. Therefore, it seems there is a overlapping/double requirement this same item. As such, please confirm if you require 08 nos. coil analyzer for both Item#10 and Item#12 (namely AC/DC Power Supply for Testing Circuit Breakers). Because both Coil Analyzer and AC/DC Power supply unit serve the same purpose.	Item# 10 is Circuit Breaker timing, motion and Coil Analyzer Test Set. Item# 12 is AC/DC Power Supply for Testing Circuit Breaker's minimum and maximum trip/close voltage and operating mechanism. They are two different test equipment.	
59.	Volume 2 of 2 GTP HANDHELD DYNAMIC MICRO OHM METER			It seemed to mix specifications of several devices. There are no unit on the market that meets all specifications (handheld 1 kg unit that provides dynamic resistance	Your understanding is correct. The required equipment is "HANDHELD MICRO OHM METER".	Y

				measurement). Please delete the word "dynamic" everywhere in specifications and replace by "static".		
60.	Volume 2 of 2 GTP MULTI-RANGE VOLTAGE INDICATOR/Transmission line voltages (600V through 765 kV) tester			The GTP is restricted to only one manufacturer. Only one manufacturer can meet the specification. Please relax the measuring range up to 400KV since PGCB does not have a higher range system above 400KV at the moment.	Your proposal is acceptable. Please follow the Addendum.	Y
61.	Volume 2 of 2 GTP Laser Rangefinder	9. Features	Measures Azimuth with TruVector: Yes	Not Applicable for this item. Please delete.	Equipment is used for transmission lines. Azimuth measurement is required. Different methods of Azimuth measurement are Acceptable	
			Azimuth Accuracy: ±0.5° Typical	Not Applicable for this item. Please delete.	Please follow the bid document	
			Point Finder: with 4x zoom camera and red-dot laser	Not Applicable for this	Different zoom range is Acceptable	

				item. Please delete.		
			The laser sensor, integrated tilt sensor and compass measure slope distance, horizontal distance, vertical distance, inclination (or percent slope), azimuth, or instantly calculate the height of any object or the missing line between two points remote from your position.	According to the above please modify the as below: The laser sensor, integrated tilt sensor and measure slope distance, horizontal distance, vertical distance, inclination (or percent slope), or instantly calculate the height of any object or the missing line between two points remote from your position.	Different description from various manufacturers having all the required features is Acceptable.	
62.	Volume 2 of 2 GTP SAFETY GROUND FOR TRANSMISSION LINE AND SUBSTATION EQUIPMENT	Document Requirements	Manufacturer's Valid ISO Certificate	All the manufacturer doesn't have ISO Certificate. In fact, many qualified American manufacturer do to adhere to ISO. They follow ASTM/ANSI/OSHA standard as obligatory govt regulations.	International Organization for Standardization (ISO) that help organizations to ensure they meet customer and other stakeholders needs within statutory and regulatory requirements related to a product or service, whereas, the referred standard by the supplier is for Testing and Materials, international standards organization that develops	

					and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. As such, the suppliers are requested to submit ISO/equivalent certificates in this regard.	
		Features		The Guaranteed Technical Particulars (GTP) is not completed because no details for the cable (Length, Diameter etc.), Clamp Details and Ground Clamp Details is provided.	Details for the cable (Length, Diameter etc.), Clamp Details and Ground Clamp Details are added in the addendum.	Y
63.	Volume 2 of 2 GTP TEMPORARY GROUND ROD AT TRANSMISSION LINE SITE	Document Requirements	Manufacturer's Valid ISO Certificate	All the manufacturer doesn't have ISO Certificate. In fact, many qualified American manufacturer do to adhere to ISO. They follow ASTM/ANSI/OSHA standard as obligatory govt regulations.	International Organization for Standardization (ISO) that help organizations to ensure they meet customer and other stakeholders needs within statutory and regulatory requirements related to a product or service, whereas, the referred standard by the supplier is for Testing and Materials, international standards	

					organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. As such, the suppliers are requested to submit ISO/equivalent certificates in this regard.	
			Valid Calibration Certificate	Not Applicable for this item. Please delete.	Your understanding is correct. Valid Test certificate is required instead of Calibration certificate.Please follow the Addendum.	Y
64.	Volume 2 of 2 GTP HYDRAULIC PULLER-TENSIONER (STRETCHING WINCH)	2.1.1	Indicative Dimension: Point 2.1	Not Applicable for this item. Please delete.	Please follow the Addendum.	Y
		1 & 2.8.3.	Adherence wheels with interchangeable Nylon Liner	In the general description (Sl no 1) it is required "Thermally treated steel adherence wheels" whereas in the optional section (sl no 2.8.3), it requires "Adherence wheels with interchangeable Nylon	Point 2.8.3 is optional and not mandatory, to leave the possibility of any innovations. The main request is steel wheels. Please follow the Addendum.	Y

				liners." The machine can be equipped either with thermally treated steel adherence wheel as requested in general specification (point 1) or it can be arranged with interchangeable nylon liners (as requested in point 2.8.3). It is NOT possible to have the 2 options in same machine.		
		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP.		
65.	Volume 2 of 2 GTP SERVICE WINCH	2.1.1	Indicative Dimension: Point 2.1	Not Applicable for this item. Please delete.	Please follow the Addendum.	Y
		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Your proposal is Acceptable.	Y

66.	Volume 2 of 2 GTP Coil	2.2.2	Max weight: 55 kg	Please provide a tolerance range (+/- 10 kg) for the weight instead of specifying the weight. Because the weight could vary from maker to make based on design & material specification.	Max. Weight- 65kg	Y
		2.2.2	Max weight: 75 kg	Please provide a tolerance range (+/- 10 kg) for the weight instead of specifying the weight. Because the weight could vary from maker to make based on design & material specification.	Max. Weight- 85kg	Y
		3.2	Welding: Tig System	Also add TIG/MIG system	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not	Please follow the Addendum.	Y

				applicable for this item.		
67.	Volume 2 of 2 GTP CONDUCTOR CAR FOR SINGLE CONDUCTOR INSPECTION	1 & 2.2.2	Wheels Metal wheels with groove suitable for rolling on the conductor or guard repo	Clarify it the wheels should be in nylon (as requested in point 1) or in metal (as requested in point 2.2.2.). The standard configuration is nylon wheels	The required wheels are made of nylon.Please follow the Addendum.	Y
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
68.	Volume 2 of 2 GTP CONDUCTOR CAR FOR MULTIPLE CONDUCTOR INSPECTION	Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
69.	Volume 2 of 2 GTP PULLEY FOR MULTIPLE CONDUCTOR			In the GTP Required 2 types of Pully for Multiple Conductor. As per price schedule the required Quantity is 35 Nos. Please give us the breakdown for Mod 1 and Mod 2.	Mod 1 total 18 Mod 2 total 17	Y

		Mod-1			OK	
		2.1.1	Dimension (A): ~~700~~ 770 ±10	The tolerance given with respect to the dimension is very minimum. We request to widen the tolerance range. At least (+/-) 30mm. Please the dimension of pully do not have any functional implications.	(+/-) 30mm is acceptable	Y
		2.1.2	Dimension (A): 630±10		(+/-) 30mm is acceptable	Y
		2.1.5	Dimension (H): 175±5		(+/-) 30mm is acceptable	Y
		2.1.6	Dimension (F): 1450±10		(+/-) 30mm is acceptable	Y
		2.1.7	Dimension (G): 630±3		(+/-) 30mm is acceptable	Y
		Mod-2				
		2.1.2	Dimension (B): 770±10		OK	
		2.1.6	Dimension (F): 1620±10		(+/-) 30mm is acceptable	Y
		2.1.9	Dimension (L): 570±30		(+/-) 30mm is acceptable	Y
		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y

			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
70.	Volume 2 of 2 GTP PULLEY FOR SINGLE CONDUCTOR			In the GTP Required 2 types of Pully for Multiple Conductor. As per price schedule the required Quantity is 35 Nos. Please give us the breakdown for Mod 1 and Mod 2.	Mod 1 total 18 Mod 2 total 17	Y
		Mod-1		The tolerance given with respect to the dimension is very minimum. We request to widen the tolerance range. At least (+/-) 30mm. Please the dimension of pully do not have any functional implications		
		2.1.1	Dimension (A): 700±10		(+/-) 30mm is acceptable	Y
		2.1.7	Dimension (G): 270±3		(+/-) 30mm is acceptable	Y
		2.1.5	Dimension (H): 175±5		(+/-) 30mm is acceptable	Y
		Mod-2				
		2.1.2	Dimension (B): 770±10		(+/-) 30mm is acceptable	Y
		2.1.7	Dimension (G): 340±3		(+/-) 30mm is acceptable	Y

		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
71.	Volume 2 of 2 GTP PULLEY FOR GROUNDING WIRE	3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
72.	Volume 2 of 2 GTP MOORING CHAIN	3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
73.	Volume 2 of 2 GTP HYDRAULIC REEL STAND	3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please	Y

				etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP	follow the Addendum.	
		Document	Manufacturer's EMC Certificate of Conformity	This Certificate is not	Please follow the Addendum.	Y

		requirement		applicable for this item.		
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
74.	Volume 2 of 2 GTP ELECTRIC SHEAR	3.1	Coefficient of rupture:No	Not Applicable for this item	Please follow the Addendum.	Y
		3.2	Welding: Tig System	Not Applicable for this item	Please follow the Addendum.	Y
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
75.	Volume 2 of 2 GTP RETRACTOR FOR TRINATE CONDUCTOR	2.2.1	Material made of stainless steel	Please also include Galvanized Steel in addition to Stainless steel.	Please follow the Addendum.	Y
		2.4	Max. Weight 12 kg	Please provide a tolerance range (+/- 10 kg) for the weight instead of specifying the weight. Because the weight could vary from maker to make	Please follow the Addendum.	Y

				based on design & material specification.		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
76.	Volume 2 of 2 GTP MACHINE FOR OPTIC FIBER		Required quantity 2 Nos.	In the GTP have 2 different type of Splicer 1. Mass Fiber splicer 2. Single Fiber Splicer Does PGCB required 1 No each of the machine or 2 Set. Please specify required quantity for each type.	1 Nos. each of the machine	
77.	Volume 2 of 2 GTP PRESSURE WASHER			GTP is prepared based on the model HDS 798C Eco which is discontinued. Please modified the specification with generalized parameters.	The supplier may propose models with similar or improved characteristics compared to those reported in the specification	

78.	Volume 2 of 2 GTP HANDLING RUNG	2.2.1	Material: stainless steel	Please also include Aluminum as an option	Aluminum may be included as an alternative, maintaining the same specified characteristics	Y
		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum..	Y

				specific welding process. Therefore, we request to state both TIG/MIG Welding process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
79.	Volume 2 of 2 GTP LADDER FOR TUBES POLE	Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
80.	Volume 2 of 2 GTP SUSPENSION LADDER FOR WORK ON LATTICE TOWERS			In the GTP Required 2 type of SUSPENSION LADDER. And Required Quantity 25 Nos. Please provide the quantity breakdown for each type.	Mod 1 total 12 Mod 2 total 13	Y
		1.5	Standard: EN 353/1 89/686/EEC	Also add standard UNI/CEN/TS 16415	EN 353/1 standard is required. The proposed standard is a technical specification,	

					not a standard	
		2.1.3	Minimum Hook opening dimensions (A): 220	Please Make it 220±15	Please follow the Addendum.	Y
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
81.	Volume 2 of 2 GTP TACKLE BLOCKS			In the GTP Required 2 type of Mooring Ladder. And Required Quantity 15 Nos. Does you require 15 Nos of each Model or altogether 15 Nos. Please provide the quantity breakdown for each type.	~~What tool does this request refer to?~~ For tackle Blocks 5 Type 1 10 type 2 For Mooring Ladder 8 Type 1 7 Type 2	Y
		1		In the specification you required 9mm steel wire along with the tackle block. Please specify the length	250 m.	Y
		2.1.13	Max Weight: 20	Please make it 25.	Please follow the Addendum	Y

		3.2	Welding: Tig System	All standard specification i.e. Directive 2006/42/EC/CE/EN etc. do not impose any specific welding process (MIG or TIG). The welding processes are chosen by manufacturers according to the type of material. Manufactures weld TIG for the aluminum element and MIG for the steel and carbon element. It is the manufacturer that can choose their way of work respecting other technical parameters/targets working required capacities/breaking strength etc. In order to ensure quality, PGCB may ask for Welder's certificate and welding specifications from the manufacturers instead of imposing any specific welding process. Therefore, we request to state both TIG/MIG Welding	The welding process is left to the manufacturer's choice but must be specified during the Bidding phase. Please follow the Addendum.	Y

				process in the GTP		
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum	Y
82.	Volume 2 of 2 GTP HYDRAULIC HAND OPERATED ACSR CONDUCTOR CUTTER	Document Requirements	Manufacturer's Valid ISO Certificate	All the manufacturer doesn't have ISO Certificate. In fact, many qualified American manufacturer do to adhere to ISO. They follow ASTM/ANSI/OSHA standard as obligatory govt regulations.	International Organization for Standardization (ISO) that help organizations to ensure they meet customer and other stakeholders needs within statutory and regulatory requirements related to a product or service, whereas, the referred standard by the supplier is for Testing and Materials, international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. As such, the suppliers are requested to submit ISO/equivalent certificates in this regard.	

83.	Volume 2 of 2 GTP CROSSBAR FOR MOORING(WORKING PLATFORM)			In the GTP Required 3 type of Crossbar for Mooring. And Required Quantity 10 Nos. Please provide the quantity breakdown for each type.	Type 1 : 6 Nos TYpe 2 : 5 Nos Type 3 : 4 Nos	Y
		Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Valid calibration certificate	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
84.	Volume 2 of 2 GTP BATTERY LOAD TEST SET	8.8	Certificate 3rd Party Safety & Evolution Certificate: To be Submitted	This certificate is applicable for the Battery Manufacturer's not for the Battery Tester.	The Supplier/manufacturer has to mention whether they have the certificate or not.	
		9.5	Battery Cell Voltage Monitoring: Must be included	This is an additional device to monitor the individual cell voltage. If this additional feature is required please specify the maximum number of Cells (60, 120, etc) need to monitor. Or PGCB wants this is as an	The feature is required and the maximum number of cells can be 120 Nos.	Y

				option which can be extended/added in future. Please clarify.		
85.	Volume 2 of 2 GTP Tower Harness with Absorbing Lanyards	Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
86.	Volume 2 of 2 GTP Quad Box Ratcheting Wrench	Document requirement	Manufacturer's EMC Certificate of Conformity	This Certificate is not applicable for this item.	Please follow the Addendum.	Y
			Manufacturer's Valid ISO Certificate	All the manufacturer doesn't have ISO Certificate. In fact, many qualified Japanese manufacturer do to adhere to ISO. They follow the Japanese Industrial (JIS) Standard as obligatory govt regulations.	International Organization for Standardization (ISO) that help organizations to ensure they meet customer and other stakeholders needs within statutory and regulatory requirements related to a product or service, whereas, the referred standard by the supplier is for Testing and Materials, international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. As such, the suppliers are requested to submit	

					ISO/equivalent certificates in this regard.	
87.	Volume 2 of 2 GTP Insulating Oil Dielectric Breakdown Test set	29	Weight: Not more than 30 kg	Different Manufacturer have different weight according to their design	Please follow the Addendum.	Y
88.	Volume 2 of 2 GTP Insulating Oil Tan Delta Test set	11	Best Resolution: 0.01 pF	For Transformer Oil Tan Delta testing 0.1 pF is ok. Since PGCB will be measuring Tan Delta of transformer oil 0.1 pF is more than acceptable. Therefore, please amend to 0.1 pF.	Please follow the Addendum.	Y
89.	Volume 2 of 2 GTP Earth Ground Test set	11	Test Frequency	The GTP is restricted to only one manufacturer. Only one manufacturer can meet the specification. Therefore, please generalize the Test	Please follow the Addendum.	Y

				Frequency range.		
			Measuring Range: 0.02 ohm to 199 ohm	The GTP is restricted to only one manufacturer. Only one manufacturer can meet the specification. Therefore, please generalize the Test Frequency range.	Please follow the Addendum.	Y
90.	Volume 2 of 2 GTP Digital Multimeter	20	Battery Life> 300 Hrs	Does 300 Hrs require for Continuous work or Battery life time? Please confirm.	Battery should run 300 hrs before the next recharge.	
		21	Jaw opening - to be mentioned	Does Multimeter require additional clamp or it's a Typo mistake.Please confirm.	It's not a mandatory requirement. the supplier is requested to mention whether the supplied equipment has the jaw opening facility or not.	
91.	Volume 2 of 2 GTP Portable Reference Standard Meter Class 0.05 & Power Quality Analyzer			The GTP is restricted to only one manufacturer. Only one manufacturer can meet the specification.	Please follow the Bid document.	
92.	Volume 2 of 2 GTP	Country of Origin	PGCB Required country of origin is USA,	Please include	Please follow the Bid document.	

	Current and Voltage Transformer Test set		Canada,EU,UK, Japan	Switzerland as a country of origin for offering quality products and wider participation.		
93.	Volume 2 of 2 GTP Handheld Dynamic Micro Ohm Meter	Country of Origin	PGCB Required country of origin is USA, Europe, Canada, Japan, Australia, South Korea, Brazil, Mexico, South Africa	Please include Switzerland as a country of origin for offering quality products and wider participation.	Please follow the Bid document.	
		Description of the Item	Supplying of brand new Hand-held Dynamic Micro ohm meter) having high accuracy and high quality without disturbance in high electromagnetic field.	Not Complied It will Come in Yellow Pelican Case	Please follow the Bid document.	
		Dual Ground	Yes	Not Applicable in our product	Please follow the Bid document.	
		Provision to preset the injection current value	Yes	Not Applicable in our product	Please follow the Bid document.	
				Please consider the points as stated above. We would earnestly request you to kindly amend for offering quality products and also for wider		

				participation.		
94.	Volume 2 of 2 GTP Three Phase Automated Transformer Test set	Country of Origin	PGCB Required country of origin is USA, UK, EU, Canada, Japan, Australia,	Please include Switzerland as a country of origin for offering quality products and wider participation.	Please follow the Bid document.	
		2.3.4	In 3 Phase current Model, all three currents are supplied simultaneously. The phase shift between the three AC currents can be specified for each signal individually.	We are offering Raytech AG Switzerland. Please consider the points stated above.	Please follow the Bid document.	
		2.3.5	Voltage Output Model Channels: 3 3 Phase: 3 x230 V AC (L-N) / 400 V AC (L-L) @ 100 mA 1 Phase: 1 x 240 V AC @ 16 A 1 x 340 V DC @ 16 A Frequency 15 Hz...599 Hz 4.000 W (for 30 sec.)		Please follow the Bid document.	

			2.400 W (continues)			
		2.5.1	<table><tr><th>INPUT</th><th>RANGE</th><th>ACCURACY</th></tr><tr><td>AC (RMS)</td><td>0 ... 4 ARMS</td><td>0.036 % rd + 0.0033 % range</td></tr><tr><td></td><td>0 ... 40 ARMS</td><td>0.023 % rd + 0.013 % range</td></tr><tr><td>DC</td><td>0 ... 0.56 ADC</td><td>0.1 % rd + 0.023 % range</td></tr><tr><td></td><td>0 ... 5.6 ADC</td><td>0.037 % rd + 0.026 % range</td></tr><tr><td></td><td>0 ... 56 ADC</td><td>0.008 % rd + 0.01 % range</td></tr></table>		Please follow the Bid document.	
		2.5.2	<table><tr><th>INPUT</th><th>RANGE</th><th>ACCURACY</th></tr><tr><td>AC (RMS)</td><td>0 ... 300 mV</td><td>0.01 % rd + 0.003 % range</td></tr><tr><td></td><td>0 ... 3 V</td><td>0.01 % rd + 0.003 % range</td></tr><tr><td></td><td>0 ... 30 V</td><td>0.01 % rd + 0.003 % range</td></tr><tr><td></td><td>0 ... 300 V</td><td>0.012 % rd + 0.003 % range</td></tr><tr><td>DC</td><td>0 ... 42.4 mV</td><td>0.022 % rd + 0.032 % range</td></tr><tr><td></td><td>0 ... 424mV</td><td>0.01 % rd + 0.017 % range</td></tr><tr><td></td><td>0 ... 4.24 V</td><td>0.007 % rd + 0.012 % range</td></tr><tr><td></td><td>0 ... 42.4 V</td><td>0.01 % rd + 0.017 % range</td></tr><tr><td></td><td>0 ... 424 V</td><td>0.007 % rd + 0.012 % range</td></tr></table>		Please follow the Bid document.	
		2.5.3	<table><tr><th>CURRENT</th><th>RANGE</th><th>ACCURACY</th></tr><tr><td>3 ADC range</td><td>10 ... 100 Ω</td><td>0.1 % rd + 0.18 %</td></tr><tr><td></td><td>1 ... 10 Ω</td><td>0.1 % rd + 0.267 %</td></tr><tr><td>30 ADC range</td><td>1 ... 10 Ω</td><td>0.037 % rd + 0.017 %</td></tr><tr><td></td><td>0.1 ... 1 Ω</td><td>0.04 % rd + 0.027 %</td></tr><tr><td>range</td><td>0.01 ... 0.1 Ω</td><td>0.033 % rd + 0.017 %</td></tr><tr><td>100 ADC range</td><td>3 ... 30 mΩ</td><td>0.033 % rd + 0.017 %</td></tr><tr><td></td><td>300 ... 3000 µΩ</td><td>0.037 % rd + 0.027 %</td></tr><tr><td>range</td><td></td><td></td></tr></table>		Please follow the Bid document.	
		2.6.2	Current Rating: 300 mA continuous, 9 A for 0.7s		Please follow the Bid document.	

			Voltage Rating: 300 V AC			
		2.10.3	**Cables and accessories** 4 × Kelvin clamp red 4 × Kelvin clamp black 2 × Kelvin clamp (3 × 4 mm connector red, 1 × 4 mm connector black) 1 × Grounding cable 6 mm2 (6 m / 19.5 ft.) 3 × Elastic rope with cable clamp and hook 1 × HV cable (15 m / 49 ft) 1 × LV cable (15 m / 49 ft) 1 × Tap changer cable (15 m / 49 ft) 1 × Ethernet PC connection cable (3 m / 10 ft.) 1 × Power cord 1 × Movement Trolley 1 × Transport case for all test units and accessories		Please follow the Bid document.	
		2.11.2	Test files changed or manipulated should indicate this clear in the report		Please follow the Bid document.	
		2.12.2	Tested according to IEC 60068-2-6; frequency range 10 to 150 Hz; acceleration 2g continuous (20 m/s2); 20 cycles per axis Tested according to IEC 60068-2-27 (operating Model); 15g / 11ms, half-sinusoid, 3 shocks in each axis		Please follow the Bid document.	

		2.18.2	Test reports from metrological institutes like PTB or KEMA		Please follow the Bid document.	
95.	Volume 2 of 2 GTP Circuit Breaker and Coil Analyzer Test Set			We intend to participate against this bid for the item quoting from High Test Technology UK. But they don't have 132 kV Live Test and Dead Tank CB, 230 kV Live Tank SF6 CB, 132 kV and 230 kV GIS CB, 400 kV Live Tank CB etc. They have Air Insulated and bushing type breakers and three Timing Measurement Module channels not six.	Please follow the Bid document.	
96.	Volume 2 of 2 GTP High Vacuum Transformer Oil Purifier and Vacuum pump system for transformer	Calibration certificate		Since the products are customized products, what does the calibration certificates mean?	Calibrations of the components used in the "Transformer oil purifier and vacuum pump system" like pressure gauges, vacuum gauge, vacuum switches, Flow meter, water Contant measuring sensors, inlet/outlet pump, vacuum pump and unit capacity,	

97.	Volume 2 of 2 GTP Item No. 6: Sweep Frequency Response Analyzer (SFRA):	23, 40, 47, 52	Sl 23: Frequency Range - 1 Hz – 25MHz minimum Sl 40: Ground Loop detection - Yes Sl 47: Frequency Range - 1 Hz – 25MHz minimum Sl 52: Frequency range: - Hz – 25MHz minimum	We would request you kindly to amend following points within the GTP: Sl 23: To amend required frequency range 10Hz to 25MHz in place of 1Hz - 25MHz. Sl 40: To omit requirement of Ground loop detection. Sl 47: To amend required frequency range 10Hz to 25MHz in place of 1Hz - 25MHz. Sl 52: To amend required frequency range 10Hz to 25MHz in place of 1Hz - 25MHz.	Many manufacturers provide the test frequency range less than 1 HZ to 25 MHZ with the ground loop detection feature. The mentioned frequency range and ground loop detection is required.	

98.	Volume 2 of 2 GTP Item # 9: TRANSFORMER TURNS RATIO TEST SETS	9, 18	Sl 9: Magnetic balance Test Sl 18: Relative Humidity 95% or Better	There is a requirement of magnetic balance test as reflected within GTP serial no. 9. Please note, this connection, that almost all manufacturers in the world do not have this feature of magnetic balance test. Accordingly we would request you kindly to amend following points within the GTP: Sl 9: To omit requirement of magnetic balance test. Sl 18: To amend required relative humidity as 90% or better.	Equipment without "magnetic balance or core balance test" feature are acceptable. Humidity as 90% or better is acceptable.	Y
99.	Volume 2 of 2 GTP Item # 50: Insulation Oil Moisture Analyzer Test Set	11	Moisture Analysis Titration method - Karl Fischer Titration Titration Speed - Min. 1.5mg per minute Max. current during test - Less than 500mA	We would request you kindly to amend following points within the GTP: Sl 10: - Moisture analysis method as Karl Fischer Titration or	Please follow the Bid document.	

				Capacitive difference. - Speed as 1.5 mg per minute or 0.6 litre per minute.		
100.	Volume 2 of 2 GTP Item # 55: DGA test kit (Gas Chromatography)			There are ambiguity in between Gas measured of 9 gases and Total Gas Combustible (TCG). We would request you kindly to amend Total Gas Combustible (TCG) as per ASTM D 3612, IEC 60567 and IEC 60599 as H2, CH4, C2H6, C2H4, C2H2, CO, CO2, O2 and N2 to keep both of the measured gases and total combustible gases same. Also would request you kindly to amend measuring range of CO2 from 10-60,000 ppm in place of 1-60,000 ppm.	All measured gases are not combustible (CO2, O2 and N2). TCG having H2, CH4, C2H6, C2H4, C2H2 and CO are acceptable. Wider measuring range for CO2 is acceptable	

101.	Volume 2 of 2 GTP Item # 56: Online DGA Test Kit			Required gas measuring method is Photo Acoustic Spectroscopy (PAS) only. Whereas Gas Chromatography (GC) method gives more accurate result in 2 minutes only. Whereas PAS gives result in 18 minutes. We would request you kindly to amend required measuring method as Photo Acoustic Spectroscopy (PAS) or Gas Chromatography (GC).	DGA Measuring methods "Optical measurement", "Photo-acoustic spectroscopy (PAS)", and "Fourier Transform Ifra-red (FTIR)" are acceptable. GC method uses consumable carrier gas and is not suitable for field use. It is for the Lab use.	
102.	Volume 2 of 2 GTP Item # 61: Multi-Functional Primary Test System for Substation Commissioning and Maintenance	9.4, 11.2, 11.4, 11.5, 12.1, 12.2		There are few critical and impossible documents and support confirmation are required as reflected within GTP clause numbers:- 9.4: Manufacturer should be OHSAS 18 001 certified	Please follow the Bid document.	

				11.2: Calibration according to ISO 17025 should be offered optionally. 11.4: Recalibration service should be offered by the manufacturer according to ISO 17025. 11.5: Calibration at the customer side should be possible and available optionally. 12.1: Vendor should have a tool-free technical support hotline available. 12.2: 24 hours support 7 days a week. Accordingly we would request you kindly to omit the above points.		
103.	Volume 2 of 2 GTP Item # 1: High Vacuum	Country of origin		Switzerland is excluded against required country of origin for a few items for example	Please follow the Bid document.	

	Transformer Oil Purifier Item # 2: Vacuum Pump System for Transformers			Item # 1, Item # 2. Requesting you to includ Switzerland as required country of origin especially against item no. 1. (High Vacuum Transformer Oil Purifier) and item number 2. (Vacuum Pump System for Transformers).		
104.	Volume 2 of 2 GTP Item # 17:Safety Ground for Transformer Line and Substation Equipment Item # 19: Temporary Ground Rod at Transmission Line Site	Country of origin		We would like to offer these two items from TECMARQUES, Brazil. Therefore, we are requesting to include Brazil as country of origin against Item # 17:Safety Ground for Transformer Line and Substation Equipment and Item # 19: Temporary Ground Rod at Transmission Line Site for wider participation.	Please follow the Bid document.	

105.	Volume 2 of 2 GTP Voltage Transformer Testing, Calibration and Assessment			There are requirements for Current Source of 0-20A @20V AC and subsequent load burden display as reflected with GTP serial number 9. Almost all are many manufacturers who do not comply with this requirement and would request you kindly to omit this requirement.	Burden test is one of the requirements. Alternate test voltage and test current is acceptable and test method can vary with the different manufacturers	
106.	Volume 2 of 2 GTP Item # 1:High Vaccum Transformer Oil Purifier	Country of Origin		Please add South Africa as the country of origin for this item.	Please follow the Bid document.	
107.	Section VI-Schedule of Requirements; Shipping Requirements		"Material dispatch clearance shall be accorded by PGCB upon submission of satisfactory test report by supplier." Please clarify what shall be considered as a satisfactory test report.		Test reports as per relevant international standards shall be considered as satisfactory.	