| **S.N** | **Clause No.** | **Text as per Bid** | **Bidder’s Queries** | **Clarification** |
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|  | **Technical** | | | |
| 1 | Clause 2.3 of Section GIS Rev 05 | The equipment offered shall be protected against all types of voltage  surges and any equipment necessary to satisfy this requirement shall deemed to be included. | We understand that surge arrestors are required to cater the requirement and are of AIS type. | Clause 2.3 of Section GIS-5A  *2.3. The design should be such that all parts subjected to wear and tear are easily accessible for maintenance purposes. The equipment offered shall be protected against all types of voltage surges and any equipment necessary to satisfy this requirement shall deemed to be included.*  Bidder is to consider the above, read with clause no. 11.2 of Section-GIS (Rev-05A) of TS and the cost of the same is to be built up by bidder under GIS equipment. |
| 2 | Clause 5.8. of Section GIS Rev 05 | The material and thickness of the enclosures shall be such as to withstand an internal flash over without burns through for a period of 300 ms at rated short time withstand current. The material shall be such that it has no effect of environment as well as from the by-products of SF6 breakdown under arcing condition. This shall be validated with Type Test. | The Value shall be in line with the requirement of IEC 62271-203. Request a concurrence on the same. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 3 | Clause 5.9 of Section GIS Rev 05 | Inspection windows (View Ports) shall be provided for Disconnect Switch and both type of earth switches i.e. Maintenance and fast operating. | Inspection windows shall be provided for Disconnector enclosures. Provision of Observation windows for Earth switches is not envisaged as such. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 4 | Clause 5.21 of Section GIS Rev 05 | The GIS shall be designed, so as to take care of the VFT over voltages generated as a result of pre-strikes and re-strikes during isolator operation. Maximum VFT over voltages peak shall not be higher than rated lightning impulse withstand voltage (LIWV) of the equipment. Necessary measures shall be under taken by GIS manufacture to restrict maximum VFT over voltages lower than the LIWV. Manufacturer shall submit the study report of VFTO generated for GIS installation. | For an 220 kV GIS system, we do not envisage VFTO studies. Hence, the same shall be excluded from SE GT PR SW GIS Ltd. scope of supply. | In line with cl. No. 5.21 of Section-GIS (Rev-05A) of Technical Specification, GIS manufacturer shall submit the study report of VFTO generated for GIS installation for 400 kV and above. Bidder to go through the complete referred clause for more clarity. |
| 5 | Clause 5.25 of Section GIS Rev 05 | The switchgear shall have provision for connection with ground mat risers through copper connections. This provision shall consist of grounding pads to be connected to the ground mat riser in the vicinity of the equipment. | Earthing details shall be provided during detailed engineering stage. However, supply of earthing materials shall be excluded from SE GT PR SW GIS Ltd. scope of supply. | Main earthmat already exists in the area under present scope of work.  All the equipment’s structures, cable trenches, auxiliary earthmat for isolators etc. shall  be earthed by connecting them to the main Earthmat by the contractor. |
| 6 | Clause 5.27 of Section GIS Rev 05 | In addition to above suitable portable scissor lift shall be provided for access of distant  portion of GIS installation. | We do not envisage this requirement. Walkways if required and portable ladder shall be provided. | Bidder to provide necessary stairs, fixed ladder, platforms and walkways (which is ever is required) for operation and maintenance access to the operating mechanism and monitoring devices as per the requirement during detailed engineering. |
| 7 | Clause 5.31 of Section GIS Rev 05 | ii) Any other alarm necessary to indicate deterioration of the gas insulating system. | Not Applicable for the offered GIS | Bidder to comply the requirement of Technical specification of bidding documents. |
| 8 | Clause 3.2.2 (H) of Section Project  (Lakhisarai SS) | Grounding | Earthing details shall be provided during detailed engineering stage. However, supply of earthing materials shall be excluded from SE GT PR SW GIS Ltd. scope of supply. | Please refer our reply at Sr. no. 5 above |
| 9 | Clause 5.41 of Section GIS Rev 05  Gas Insulated Bus (GIB) layout : | The horizontal clearance between GIB and GIS building /any other building wall shall be preferably three (3) meters. | The space/area utilization for such a configuration is very high and request customer to accept the standard spacing's between circuits considering the fact that the Bus-ducts are passive and requires almost no maintenance. Request PGCIL to accept the same. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 10 | Clause 5.39.3 of Section GIS Rev 05 | The enclosure of the GIS may be grounded at several points so that there shall be grounded cage around all the live parts. A minimum of two nos. of grounding  connections should be provided for each of circuit breaker, cable terminals, surge arrestors, earth switches and at each end of the bus bars. The grounding continuity between each enclosure shall be effectively interconnected externally with Copper /Aluminum bonds of suitable size to bridge the flanges. | The GIS design is such, the proper bonding is ensured by direct metal to metal flange connections and 2 nos. earthing provisions given for grounding. | Bidder to comply the requirement specified in the technical specification. However, the detail requirement of Grounding of GIS shall be decided during detailed engineering based on GIS manufacturer earthing design calculations. |
| 11 | Clause 6.6.7 of Section GIS Rev 05 | Provisions shall be made for attaching an operational analyzer to record travel, speed and making measurement of operating timings etc. after installation at site. The contractor shall supply three set of transducer for each substation covered under the scope. | The supply of transcducers is excluded SE GT PR SW GIS Ltd. Scope of supply | The contractor shall supply 03 set of transducer for each substation under the present contract and the cost of the same is to be built up by bidder under GIS equipment. |
| 12 | Clause 6.6.8 of Section GIS Rev 05 | Circuit Breaker shall be supplied with auxiliary switch having additional 8 NO( normally open) and 8 NC ( normally closed) contacts for future use over and above those required  for switchgear interlocking and other control and protection function. These spare NO and NC contacts shall be wired upto the local control cubicle. | Auxiliary switches are of standard design/size suitably designed for the available space. Hence the required additional 8 NO (Normally open) and 8 NC (normally closed) contacts shall be provided to customer through contact multiplication relays at LCC. | Noted. However, detail shall be finalized during detailed engineering meeting the requirements of Technical Specifications. |
| 13 | Clause 6.7.2 of Section GIS Rev 05 (Control) | The breaker shall normally be operated by remote electrical control. Electrical tripping shall be performed by shunt trip coils. However, provisions shall be made for local electrical control. For this purpose a local/remote selector switch and close and trip control switch/push buttons shall be provided in the breaker control cabinet. | As per our standard practice the Local/Remote switches will be provided in the Local Control Cubicle (LCC). | Noted. However, detail shall be finalized during detailed engineering meeting the requirements of Technical Specifications. |
| 14 | Clause 7.2.5 of Section GIS Rev 05 | For motor-operated disconnect switches, the control should be electrically and/or mechanically uncoupled from the drive shaft when the switch is operated manually to prevent coincident power operation of the switch and the drive mechanism(s). | Only electrical inter-locks possible between DS & ES. We do not envisage providing any mechanical interlocks. Request customer to kindly accept the same. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 15 | Clause 7.2.10 of Section GIS Rev 05 | Each disconnector shall be supplied with auxiliary switch having additional 8 NO (NormallyOpen) and 8 NC (Normally Closed) contacts for future use over and above those requiredfor switchgear interlocking and automation purposes. These spare NO and NC contacts shall be wired up to the local control cabinet. | Auxiliary switches are of standard design/size suitably designed for the available space. Hence the required additional 8 NO (Normally open) and 8 NC (normally closed) contacts shall be provided to customer through contact multiplication relays at LCC. | Please refer our reply at Sr. no. 12 above. |
| 16 | Clause 7.2.13 of Section GIS Rev 05 | The disconnectors and safety grounding switches shall have a mechanical and electrical inter-locks to prevent closing of the grounding switches when isolator switches are in the closed position and to prevent closing of the disconnectors when the grounding switch is in the closed position. Integrally mounted lock when provided shall be equipped with a unique key for such three phase group. Master key is not permitted. | The disconnectors and the safety grounding switches are separate modules in GIS design and shall have only electrical inter-locks between them. However the required padlocking facility shall be provided for the manual interlocking for additional protection. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 17 | Clause 8.2 of Section GIS Rev 05 | Each safety grounding switch shall be electrically interlocked with its associated disconnectors and circuit breaker such that it can only be closed if both the circuit breaker and disconnectors are in open position. Safety grounding switch shall also be mechanically key interlocked with its associated disconnectors. | The disconnectors and the safety grounding switches are separate modules in GIS design and shall have only electrical inter-locks between them. However the required padlocking facility shall be provided for the manual interlocking for additional protection. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 18 | Clause 8.6 of Section GIS Rev 05 | Each ground switch shall be fitted with auxiliary switches having 4 NO (Normally Open) and 4 NC (Normally Closed) contacts for use by others over and above those required for local interlocking and position indication purposes. | Auxiliary switches are of standard design/size suitably designed for the available space. Hence the required additional 4 NO (Normally open) and 4 NC (normally closed) contacts shall be provided to customer through contact multiplication relays at LCC. | Please refer our reply at Sr. no. 12 above. |
| 19 | Clause 9.9 of Section GIS Rev 05 | Each high speed ground switch shall be fitted with auxiliary switches having 4 NO  (Normally Open) and 4 NC (Normally Closed) contacts for use by others, over and above  these required for local interlocking and position indication. | Auxiliary switches are of standard design/size suitably designed for the available space. Hence the required additional 4 NO (Normally open) and 4 NC (normally closed) contacts shall be provided to customer through contact multiplication relays at LCC. | Please refer our reply at Sr. no. 12 above. |
| 20 | Clause 11.2 of Section GIS Rev 05 | Insulation co-ordination and selection of surge arrestor | The same shall be excluded from SE GT PR SW GIS Ltd. scope of supply. | Insulation co-ordination and selection of surge arrestor is in bidder’s scope. Also refer our reply at Sr. no. 1 above. |
| 21 | Clause 11.3.2 of Section GIS Rev 05 | Surge arrestor shall be disconnect-link type and be attached to the gas-insulated system in such a manner that they can be readily disconnected from the system while the system is being dielectrically tested. | Noted. However gas works shall be required to do the same. Also we do not foresee any requirement of GIS LA. | Noted. Please refer our reply at Sr. no. 1 above. |
| 22 | Clause 15.2.1 of Section GIS Rev 05 | It shall comprise structural frames completely enclosed with specially selected smooth finished, cold rolled sheet steel of thickness not less than 3 mm for weight bearing members of the panels such as base frame, front sheet and door frames, and 2.0mm  for sides, door, top and bottom portions. | As per the standard practice, for the weight bearing members a sheet thickness of 2.5 mm is more than sufficient and as a GIS manufacturer we recommended the same and for non weight bearing members the same is 2 mm thick. We request customer to kindly confirm the same. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 23 | Clause 22 of Section GIS Rev 05 | All transport packages containing critical units viz Circuit breakers and Voltage transformers shall be provided with sufficient number of impact recorders (on returnable basis) during transportation to measure the magnitude and duration of the impact in all three directions. | VTs being an critical equipment only impact recorders shall be provided for VTs. We request customer to kindly accept the same. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 24 |  | Cost of the raised platform for temporary storage is deemed to be included in overall cost. The raised platform needs to be made ready before arrival of GIS equipment at site. The contractor may use the available storage areas at site with permission of site in charge. | The Cost of any specific requirements with regards to Platform or civil works are excluded from SE GT PR SW GIS Ltd. Scope. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 25 | Clause 27 of Section GIS Rev 05 | TESTING & MAINTENACE EQUIPMENT  SF6 Gas leakage detector. Gas filling and evacuating plant : (Gas Processing unit)  SF6 gas analyzer: Portable Partial Discharge(PD) monitoring system (Shall generally applicable for  220kV&132 kV)  Online Partial Discharge Monitoring System (Applicable for 765kV& 400 kV GIS) | The same shall be excluded from SE GT PR SW GIS Ltd. scope of supply. | Bidder to quote as per BPS. |
| 26 | Annexure A of Section GIS Rev 05 |  | Our type tested 245KV GIS has passive busbar design. We meet the requirement of service continuity, maintenance & repair without provision of any barrier in busbar. All the requirements of repair & maintenance as per specifications are met with passive non-segregated busbar design. This design is accepted by various utilities in India and Abroad. This type of passive non-segregated busbar design is working satisfactorily at site without any issues hence we request an acceptance of this design. | Bidder to comply the requirement of Technical specification of bidding documents. |
| 27 | General | Length of Transmission Line | Please provide length of all transmission lines associated with 220KV GIS | Line length shall be provided during detailed engineering. |
| 28 | Annexure-S11 of Section Specific requirement, Rev 08 | LCC | We understand that only soft logic interlock is to be provided in LCC. No hard wired interlock is envisaged. Kindly confirm the same. | Hard wired interlock logic shall be provided in LCC. |
| 29 | Annexure-S11 of Section Specific requirement, Rev 08 | 420 kV Gas Insulated Switchgear (Double Main Busbar Scheme)  i) GIS Bus bar Module:  Three (3) numbers 1-phase Potential Transformers complete with manual operated  isolating Switch/device. | As per given reference clause we have considered manual integrated isolator for busbar voltage transformers. No separate disconnectors for busbar are envisaged, Kindly confirm. | 420kV GIS is not envisaged under present scope of work. Further, Bidder to comply the requirement of Technical specification of bidding documents. |
| 30 | Clause 3 of Section Project | Scope of work | Please confirm whether Extension of 400kV lakhisarai substation is AIS or GIS type | Extension of 400kV Lakhisarai substation is envisaged as AIS. |
| 31 | Clause 3.1.2 (S) of Section Project | PMU | As per BPS PMU line Item is not mentioned please clarify the line item for PMU in BPS. | Lakhisarai and Rangpo S/s do not envisage scope pertaining to PMU. The bidder has to bid as per BPS. |
| 32 | Clause 3.2 of Section Project  (Rangpo ss) | Extn. of 132kV Rangpo S/S | Please provide the existing GIS Hall drawing with equipment arrangement for 132kV Rangpo substation | Existing GIS hall drawing shall be provided during detailed engineering. |
| 33 | Clause 3.2 of Section Project  (Rangpo ss) | Extn. of 132kV Rangpo S/S | Please provide the existing make name of 132kV GIS at Rangpo. | Existing make of Rangit and Melli GIS line module is Hyosung. Further, no interfacing with existing GIS module is envisaged under present scope. |
| 34 | Clause 3.2 of Section Project  (Rangpo ss) | Extn. of 132kV Rangpo S/S | Please provide the existing earthmat details for 132kV Rangpo Substation. | Existing Earthmat details shall be provided during detailed engineering. |
| 35 | Clause 3.1.2 (G) of Section Project  (Lakhisarai ss) | Fire Protection System | Please provide the existing fire hydrant details/ Layout for extension part and Make of existing fire hydrant make. | Existing fire hydrant details/ Layout of Lakhisarai substation shall be provided during detailed engineering. |
| 36 | Clause 3.1.2 (S) of Section Project | The broad Scope of the procurement of PMU shall include planning, designing, engineering, supply, transportation, insurance, delivery at site, unloading, handling, storage, installation, termination, testing and demonstration for acceptance, commissioning, and documentation for PMU as per BPS. | Line items for PMU not mentioned in BPS. Please confirm the scope of PMU. | Lakhisarai and Rangpo S/s do not envisage scope pertaining to PMU. |
| 37 | Sr. no. 7 of BPS schedule I  (Lakhisarai SS) | Controlled Switching Device for 420 kV, 3-ph Circuit Breaker | As per BPS quantity for Controlled Switching Device for 420 kV, 3-ph Circuit Breaker is 2 Nos. | Bidder to quote as per BPS. |
| 38 | Sr. no. 122 of BPS schedule I (Lakhisarai SS) | Supplying, filling and compacting CNS material as per specification under floors, foundations, roads, cable trenches, drains etc inlayers not exceeding 200 mm thickness | Kindly advise where this CNS Soil filling is foreseen. | Shall be decided during detailed engineering as per actual soil condition. |
|  | **Commercial** | | | |
| 1 | First\_Envelope\_and\_Bid\_Forms (Attachment-21) | Attachment-21-Undertaking by the bidder regarding Compliance of DMI&SP Policy | Please confirm that "Attachment-21-Undertaking by the bidder regarding Compliance of DMI&SP Policy" shall be submitted by the Bidder only, not required from Manufacturer. | Bidders are requested to refer ITB Cl. 9.3 (v) in BDS, g which is amply clear in this regard. |
| 2 | First\_Envelope\_and\_Bid\_Forms (Attachment-24) | Attachment-24-Bid Securing Declaration | Please confirm that "Attachment-24-Bid Securing Declaration" shall be submitted by the Bidder in the from Soft copy and Hard copy both. | Bidders are requested to refer ITB Cl. 9 (Documents Comprising the Bid) in this regard. |
| 3 | First\_Envelope\_and\_Bid\_Forms (Attachment-26) | Attachment-26-Affidavit of Self certification regarding Local Content | Please confirm that "Attachment-26-Affidavit of Self certification regarding Local Content" shall be submitted by the Bidder only, not required from Manufacturer. | Bidders are requested to refer ITB Cl. 9.3 (aa) in BDS, g which is amply clear in this regard. |