

REPLIES TO PRE BID QUERIES LOT 2 DATED 11.07.2023

NIT NO : PNMM/PC 183/E 4021/NCB DATED 09.06.2023

SUB : GRID CONNECTIVITY TO TFL TO SUPPLY 90 MW POWER AND CONSTRUCTION OF 220 KV LILO GIS AT TALCHER FERTILIZERS LTD

Sr. No.	Reference of Tender Document			Query to End Customer	Reply to EPC Dt.10.7.23							
	Sec. No.	Page No.	Clause No. Subject									
1	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	76 of 1403	1.4 Ambient temperature 50°C	Offered GIS type 8DN9 is having rate current carrying capacity of 3150 A at 40 Deg C ambient temperature. At 50 Deg C., the rated current of the switchgear shall be derated to below values. 1. busbar : 2500 A & 2. switchgear : 2600 A. Request your kind acceptance.	Provision of Tender Document shall prevail. Any decision in this regard shall be dealt during Detailed Engineering.							
2	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	78 of 1403	4.3 The switchgear, which shall be of modular design, shall have complete phase segregation.	In the offered GIS type 8DN9, the busbar is of thee phase encapsulated design and the switchgear is of single phase encapsulated design. This design is type tested as per the latest standard of IEC 62271-203. Request you to kindly accept the same.	Bidder's request in this regard may be accepted.							
3	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	78 of 1403	4.4 whenever the pressure of the adjacent gas compartment is reduced during maintenance, this compartment shall be designed so that it shall remain in service to perform its intended duty.	During repair and maintenance if the pressure of a compartment is reduced, then from safety perspective required pre-requisites to be met in line with the OEM requirement.	Provision of Tender Document shall prevail. Any decision in this regard shall be dealt during Detailed Engineering.							
4	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	78 of 1403	4.4 The bus enclosure should be sectionalized in a manner that maintenance work on any bus disconnecter (when bus and bus disconnecter are enclosed in a single/three enclosure) can be carried out by isolating and evacuating the small effected section and not the entire bus.	Offered GIS type 8DN9 (220 kv) is having separate busbar and busbar disconnecter compartments. Thus, the said clause is not applicable for our offered design. Further, offered GIS is our globally proven type tested design having passive non segregated busbar design meeting all the functional requirements of service continuity as per specifications. We confirm offered GIS is line with all latest requirements of IEC 62271-203.	Provision of Tender Document shall prevail. Any decision in this regard shall be dealt during Detailed Engineering.							
5	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	79 of 1403	4.5 The material and thickness of the enclosures shall be such as to withstand an internal flash over without burn through for a period of 300ms at rated short time withstands current.	Our offered GIS design are completely type tested for internal arc test in line with latest requirements of IEC. We confirm compliance to IEC 62271-203. (Table 4) for all the voltage levels. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="2" style="text-align: center;">>40 kA r.m.s.</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0.1 s</td> <td style="font-size: small;">No external effect other than the operation of suitable pressure relief devices</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">≤0.3 s</td> <td style="font-size: small;">No fragmentation (burn-through is acceptable)</td> </tr> </table>	>40 kA r.m.s.	1	0.1 s	No external effect other than the operation of suitable pressure relief devices	2	≤0.3 s	No fragmentation (burn-through is acceptable)	Provision of Tender Document shall prevail.
>40 kA r.m.s.	1	0.1 s	No external effect other than the operation of suitable pressure relief devices									
	2	≤0.3 s	No fragmentation (burn-through is acceptable)									
6	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	81 of 1403	4.24 The ladders and walkways shall be provided wherever necessary for access to the equipment.	For 220 kv GIS, we shall provide the A type ladder which is sufficient for any unlikely access any high parts of the GIS.	Provision of Tender Document shall prevail.							
7	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	81 of 1403	4.27 ii) Any other alarm necessary to indicate deterioration of the gas insulating system.	Alarms regarding the loss of SF6, low SF6 shall be provided in the GIS. However, facility for continuous monitoring of measurement of the deterioration or the quality of gas is not possible. However, if required, the quality of the gas can be measured intermittently with the help of portable gas analyzer.	Provision of Tender Document shall prevail.							
9	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	83 of 1403	4.35 Gas Insulated Bus (GIB) layout:	The GIS layout shall be as per manufacturer's standard design and normal practice used for all the previous supplies in OPTCL and other utilities. Request you to kindly accept the same.	Provision of Tender Document shall prevail.							
10	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	83 of 1403	4.36 Extension of GIS:	We confirm the provision for future extension is available in the offered 220kv GIS meeting functional requirement of service continuity. We understand that any requirement of design and supply of interface module along with the associated hardware etc. as per tender shall be part of OEM performing future extension.	Provision of Tender Document shall prevail.							
11	TECHNICAL SPECIFICATION FOR 220KV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	87 of 1403	5.7 a) The mechanism shall be housed in a dust proof cubicle and shall have IP: 45 degree of protection.	The degree of protection shall be IP 43 for indoor installation of GIS. We have supplied the same in all our previous supplies in OPTCL and other utilities. Request you to kindly accept the same.	Bidder's request in this regard may be accepted.							

12	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	90 of 1403	17	Full wave impulse withstand (1.2 /50 µs) between terminals with circuit breaker open : 1050+206 kVp One minute power frequency withstand voltage between terminals with circuit breaker open : 460+145kV rms.	The BIL of the breaker shall be as per the values specified in IEC 62271-100.	Bidders are requested to refer IEC 60694 & IEC 62271-100
13	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	91 of 1403	6.2.2	Disconnectors shall be suitable to switch the bus charging currents during their opening and closing and shall confirm to viz TD1 and TD3 as per Annexure F of IEC: 62271-102	The bus charging sequence is not applicable for disconnectors below 300 kV as per IEC 62271-102. Thus the test reports of it shall not be provided.	Bidders are requested to follow as per IEC 62271-102, Annexure-F
14	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	92 of 1403	6.2.12	The Disconnectors and safety grounding switches shall have a mechanical and electrical interlocks to prevent closing of the grounding switches when isolator switches are in the closed position	There shall be an electrical interlock between the DS and ES. For mechanical interlocking, we shall provide padlocking facility.	Provision of Tender Document shall prevail.
15	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	98 of 1403	II	1 TRAF0, LINE and Bus Coupler CT parameters	We request you to kindly confirm the CT parameters provided along with our technical offer. Any changes in the same in detailed engg stage shall be first technically discussed with us and may attract time and price implications.	Bidders query in this regard is not clear.
16	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	101 of 1403	10	SURGE ARRESTORS	Not applicable for the said tender	GIS Type Sas are not envisaged
17	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	105 of 1403	12	SF6 GIS TO XLPE CABLE TERMINATION:	Not applicable for the said tender	220kV XLPE Cable Termination to SF6 GIS is in Bidder's Scope at 220/33kV MRSS end. Provision of Tender Document shall prevail.
18	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	106 of 1403	13.2.1	Local Control cubicle shall be free standing, floor mounting type	LCC shall be bay mounted for 220 kV GIS level in line with the previous supplies.	Provision of Tender Document shall prevail.
19	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	107 of 1403	13.2.10	Electrical bolt interlocks shall be energized only when the operating handle of the mechanism is brought to the working position	Electrical bolt interlock is not applicable for the 220 kV GIS level. We shall provide padlocking facility for the drives. Request your kind acceptance.	Provision of Tender Document shall prevail.
22	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	112 of 1403	19	All transport packages containing critical units viz, Circuit breakers and Voltage transformers shall be provided with sufficient number of electronic impact recorders	Shock indicators shall be provided only for VT and Surge arrester. For other equipment, requirement of shock indicators is not envisaged as per manufacturer's design. The same philosophy is adapted and proven in previously executed projects.	Provisions of Tender Document in this regard are amply clear and same shall prevail.
23	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	116 of 1403	23	TESTING & MAINTENACE EQUIPMENT: SF6 Gas leakage detector. Gas filling and evacuating plant : SF6 gas analyzer: Portable Partial Discharge (PD) monitoring system:		Bidders query in this regard is not clear.
24	TECHNICAL SPECIFICATION FOR 220kV SF6 GAS INSULATEDMETAL ENCLOSED SWITCHGEAR	118 of 1403	24.1	The travelling, lodging, boarding & visa arrangement including all expenses shall be made by the successful Agency for the above training.		Bidders query in this regard is not clear.
25	SLD	SLD	SLD	VT with disconnector in Bus bar measuring	As per previous supplies, we recommend to proceed with VT with manual isolating type VT in BBM instead of motorized isolated VT. If the VT is motorized, then remote operation is possible. However, the isolation of VT is required only during O&M operation. This can be directly handled at site, which will help to reduce human error and any malfunction, and is better and reliable from safety perspective. This solution, being supplied in the previously executed projects at various utilities across India, is	Provisions of Tender Document in this regard are amply clear and same shall prevail.
26	BOQ	BOQ	1.01	1.01 High speed fault making motorized grounding switch	HSES is asked for in the BOQ in transformer bay. However the same is not shown in the SLD. We do not envisage the need of HSES in trafo bay, considering the less amount of charges it has to earth. Thus we shall provide the Maintenance earth switch, request you to kindly confirm the same.	Bidders are requested to refer the Single Line Diagram and Protection SLD issued along with the Tender Document in this regard

27	BOQ	BOQ	1.05	245kV, 3150A, 50kA, 3 sec, single phase, SF6 gas Insulated Bus Duct outside GIS Hall	The bus duct qty indicated in the BOQ shall be considered as from the outgoing DS to the SF6 air bushings. i.e. total length of the busducts. Kindly confirm.	As per the provision of Tender, the BOQ for GIB length is from outside GIS hall.
28	BOQ	BOQ	1.07	Portable Partial Discharge(PD) monitoring system: 245kV system shall have Portable Partial Discharge(PD) monitoring system & shall be capable for measuring PD in charged GIS environment ,bandwidth in order of 100 MHz–2GHz & provision to select a wide range of intermediate bandwidths and the principle of operation shall be based on UHF principle of detection. The Detection and measurement of PD and bouncing particles having in built large colored LCD for displaying and storing facility in the instrument for further analysis to locate actual source of PD such as free conducting particles, floating components, voids in spacers, particle on spacer surfaces etc.	Offered GIS type 8DN9 shall be equipped with the inbuilt partial discharge monitoring sensors.	Provision of Tender Document shall prevail. Any decision in this regard shall be dealt during Detailed Engineering.