

## TECHNICAL AMENDMENT 01 DATED 10/11/2025

**REVISED SYSTEM PARAMETERS, PART OF SECTION-1**  
**PART-B**

9.16 of Specific Requirements, revised as

Sl. No.	Description of bay	400/220kV Kaying (New) GIS	
		400kV	220kV
1	Bus Bar	5000A	3500A
2	Line bay	3150A	2000A
3	ICT bay	3150A	2000A
4	Bus Reactor Bay	3150A	NA
5	Line Reactor Bay	3150A	NA
6	Tie bay	3150A	NA
7	Bus Coupler Bay	NA	3500A

**NEW CLAUSE ADDED IN ANNEXURE\_SECTION\_PROJECT**

9.16	400 kV Bay configuration at Kaying PS S/s shall consist of 03 Nos. of full diameter (one diameter consist of two Nos. Main and associated Tie bays) for termination of ICT /Bus Reactor/Line bays as per following feeder distribution:								
	<table> <tr> <th>Configuration</th><th>Number of diameters</th></tr> <tr> <td>ICT (400 kV side of 400/220 kV ICT)- Tie- Line</td><td>1 (One)</td></tr> <tr> <td>ICT (400 kV side of 400/220 kV ICT)- Tie- Bus Reactor</td><td>1 (One)</td></tr> <tr> <td>Line -Tie- Bus Reactor</td><td>1 (One)</td></tr> </table>	Configuration	Number of diameters	ICT (400 kV side of 400/220 kV ICT)- Tie- Line	1 (One)	ICT (400 kV side of 400/220 kV ICT)- Tie- Bus Reactor	1 (One)	Line -Tie- Bus Reactor	1 (One)
Configuration	Number of diameters								
ICT (400 kV side of 400/220 kV ICT)- Tie- Line	1 (One)								
ICT (400 kV side of 400/220 kV ICT)- Tie- Bus Reactor	1 (One)								
Line -Tie- Bus Reactor	1 (One)								
9.17	Additional space in 400 kV GIS hall for future bays to be constructed under present scope at Kaying S/s:								
	<i>Space for future 02 Nos. diameter in addition to the present scope shall also be constructed by the TSP along with space for bus extension module and space for associated LCC, C&amp;R and communication panels shall be kept in the 400 kV GIS building. The same shall be utilized in future expansion of the S/s without augmentation of GIS hall.</i>								
9.18	Additional space in 220 kV GIS hall for future bays to be constructed under present scope at Kaying s/s:								
	<i>Space for future 06 Nos. bays in addition to the present scope shall also be constructed by the TSP along with space for bus extension module and space for associated LCC, C&amp;R and communication panels shall be kept in the 220 kV GIS building. The same shall be utilized in future expansion of the S/s without augmentation of GIS hall.</i>								
9.19	Both the 400 kV & 220 kV GIS building shall be suitable for expansion such that future adjacent GIS bays can be installed from either side of GIS building as per layout requirement.								

SI. No.	Item Description	Unit		Remarks
1.00	SUPPLY- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
1.01	420KV, 5000 A, 63 KA, SF6 GIS BUS BARMODULE AS PER SECTION-PROJECT,TECHNICAL SPECIFICATION	SET	2	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.02	420KV, 3150 A, 63 KA, SF6 GIS ICT FEEDERBAY MODULE AS PER SECTION-PROJECT,TECHNICAL SPECIFICATION	SET	2	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.03	420 KV, 3150 A, 63 KA, SF6 GIS LINEFEEDER BAY MODULE(WITHOUT PIR) AS PERSECTION-PROJECT, TECHNICALSPECIFICATION	SET	2	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.04	420KV, 3150 A, 63 KA, SF6 GIS SWITCHABLE LINE REACTOR BAY MODULE ASPER SECTION-PROJECT, TECHNICAL SPECIFICATION	SET	2	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.05	420KV, 3150 A, 63 KA, SF6 GIS BUSREACTOR BAY MODULE AS PERSECTION-PROJECT, TECHNICALSPECIFICATION	SET	2	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.06	420KV, 3150 A, 63 KA, SF6 GIS TIE BAYMODULE(WITHOUT PIR) AS PERSECTION-PROJECT, TECHNICALSPECIFICATION	SET	3	IN FULL COMPLIANCE WITH THE TECHNICAL SPECIFICATION, INCLUSIVE OF LCC, SF6 GAS, STRUCTURE, HARDWARES & EARTHING MATERIALS ETC TO COMPLETE GIS SYSTEM
1.07	420KV, 3150A, 63KA SF6 TO AIR BUSHING INCLUDING SUPPORT STRUCTURE	SET	24	
1.08	CONTROLLED SWITCHING DEVICE FOR 420 KV, 3-PH CIRCUIT BREAKER	EA	9	
1.09	420KV, 3000A, 63KA, SINGLE PHASE, SF6 GAS INSULATED BUS DUCT (GIB)OUTSIDE GIS HALL ALONGWITH ASSOCIATED SUPPORT STRUCTURE, ETC. AS PERTECHNICAL SPECIFICATION	M	1500	

Sl. No.	Item Description	Unit		Remarks
2.00	SUPPLY- GIS : 220KV, 40KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
2.01	245 KV, 3500A, 50KA, SF6 GIS BUS BARMODULE AS PER SECTION-PROJECT,TECHNICAL SPECIFICATION	SET	2	
2.02	245KV, 2000 A, 50 KA, SF6 GIS ICT FEEDERBAY MODULE AS PER SECTION-PROJECT,TECHNICAL SPECIFICATION	SET	2	
2.03	245KV, 2000 A, 50 KA, SF6 GIS LINE FEEDER BAY MODULE AS PERSECTION-PROJECT, TECHNICALSPECIFICATION	SET	2	
2.04	245KV, 3500 A, 50 KA, SF6 GIS BUSCOUPLER BAY MODULE AS PERSECTION-PROJECT, TECHNICALSPECIFICATION	SET	1	
2.05	245KV,2500A, 50KA, 3 SINGLE PHASE/3PHASE, SF6 GAS INSULATED BUS DUCT (GIB)OUTSIDE GIS HALL ALONGWITH ASSOCIATEDSUPPORT STRUCTURE(QUANTITY MENTIONEDHERE IS FOR 3 PHASE TYPE)	M	250	
2.06	245KV, 2000A, 50KA SINGLE PHASE SF6 TO AIR BUSHING	EA	12	
3.00	SUPPLY- GIS: SPECIAL TOOLS AND TESTING & MAINTENANCE INSTRUMENTS AS PER TS			
3.01	PORTABLE PARTIAL DISCHARGE MEASUREMENT TEST KITWITH ALL NECESSARY ACCESSORIES,INDUSTRIAL GRADE LAPTOP AND LICENSEDSOFTWARE AS PER TECHNICALSPECIFICATION.	EA	1	

Sl. No.	Item Description	Unit		Remarks
3.02	SF6 GAS ANALYZER	EA	1	
3.03	SF6 GAS LEAKAGE DETECTOR	EA	1	
3.04	SCISSOR LIFT	EA	1	
3.05	SF6 GAS PROCESSING UNIT FOR 400KV GIS STATION	SET	1	
3.06	DEW POINT METER	SET	1	

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ANNEXURE\_400&220KV\_GIS\_BOQ\_KAYLING, REV.1 10/11/2025

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.01	400KV GIS-SF6 GAS PRESSURE RELIEF DEVICE ASSEMBLY OF EACH TYPE	Set	2	1 Set = 1 number of each type, make & rating
4.02	SF6 PRESSURE GAUGE CUM SWITCH /DENSITY MONITORS AND PRESSURESWITCH AS APPLICABLE, OF EACH TYPE-400KV GIS	SET	3	
4.03	COUPLING DEVICE FOR PRESSURE GAUGE CUM SWITCH FOR CONNECTINGGAS HANDLING PLANT OF EACH TYPE-400KV GIS	SET	2	
4.04	RUBBER GASKETS, O RINGS AND SEALS FOR SF6 GAS FOR GISENCLOSURE OF EACH TYPE-400KV GIS	SET	3	
4.05	400KV GIS-MOLECULAR FILTER FOR SF6 GAS WITH FILTER BAGS (5 % OF TOTALWEIGHT)	SET	1	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.06	CONTROL VALVES FOR SF6 GAS OF EACH TYPE- 400KV GIS	SET	3	
4.07	400KV GIS-SF6 GAS (5 % OF TOTAL GAS QUANTITY)	LOT	1	
4.08	LOCKING DEVICE TO KEEP THE DIS-CONNECTORS (ISOLATORS)AND EARTHING/FAST EARTHING SWITCHES IN CLOSE OR OPEN POSITION IN CASEOF REMOVAL OF THE DRIVING MECHANISM-400KV GIS	SET	3	
4.09	UHF PD SENSORS OF EACH TYPE ALONG WITH BNC CONNECTOR FOR 420KV GIS	Set	5	1 Set = 1 number of each type, make & rating
4.10	400KV GIS-SUPPORT INSULATORS (GAS THROUGH) OF EACH TYPE (COMPLETE WITHMETAL RING ETC.) ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	Set	5	1 Set = 1 number of each type, make & rating
4.11	400KV GIS-GAS BARRIERS OF EACH TYPE (COMPLETE WITH METAL RING ETC.)ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	Set	5	1 Set = 1 number of each type, make & rating
4.12	400KV GIS- 3150A SF6 TO AIR BUSHING COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating

SI. No.	Item Description	Unit		Remarks
<b>4.00</b>	<b>SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS</b>			
4.13	LCC SPARES - AUX. RELAYS, CONTACTORS,PUSH BUTTONS, SWITCHES,LAMPS,ANNUNCIATION WINDOWS, MCB, FUSES,TIMERS, TERMINAL BLOCKS ETC. OF EACHTYPE & RATING-400kV GIS	SET	2	
4.14	400KV GIS-ONE POLE OF 3150A CIRCUIT BREAKER WITHOUT PIR WITHINTERRUPTER, MAIN CIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETEIN ALL RESPECT	SET	1	
4.15	Trip coil assembly with resistor for420kV GIS Circuit Breaker (asapplicable)	SET	3	
4.16	Closing coil assembly with resistor for420kV GIS Circuit Breaker (asapplicable)	SET	3	
4.17	RELAYS, POWER CONTACTORS, PUSH BUTTONS, TIMERS & MCBS ETC. (ASAPPLICABLE) OF EACH TYPE FOR 400KV GIS CIRCUIT BREAKER	SET	1	
4.18	Auxiliary switch assembly of each type for 420kV GIS Circuit Breaker	SET	3	
4.19	400KV GIS CIRCUIT BREAKER-OPERATION COUNTER	Set	3	1 Set = 1 number of each type, make & rating

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.20	400KV GIS CIRCUIT BREAKER-HYDRAULIC OPERATING MECHANISM WITH DRIVEMOTOR (FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
4.21	HYDRAULIC FILTER OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFPPLICABLE) 400KV GIS CIRCUIT BREKAER	SET	1	
4.22	400KV GIS CIRCUIT BREAKER- HOSE PIPE OF EACH TYPE (AS APPLICABLE) (FORHYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
4.23	400KV GIS CIRCUIT BREAKER - N2 ACCUMULATOR (FOR HYDRAULIC OPERATEDMECHANISM, IF APPLICABLE)	SET	1	
4.24	VALVES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
4.25	PIPE LENGTH (COPPER & STEEL) OF EACH SIZE & TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
4.26	PRESSURE SWITCHES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	



SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.27	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
4.28	400KV GIS CIRCUIT BREAKER-HYDRAULIC OIL (5% OF TOTAL OIL QUANTITY)(FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
4.29	PRESSURE RELIEF DEVICE OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM,IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
4.30	400KV GIS CIRCUIT BREAKER-COMPLETE SPRING OPERATING MECHANISMINCLUDING CHARGING MECHANISM ETC. (FOR SPRING OPERATED MECHANISM, IFAPPLICABLE)	SET	1	
4.31	400KV GIS CIRCUIT BREAKER- COMPLETE HYDRAULIC-SPRING OPERATINGMECHANISM INCLUDING CHARGING MECHANISM ETC. (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)	SET	1	
4.32	PRESSURE SWITCHES OF EACH TYPE FOR420KV GIS CIRCUIT BREAKER (ForHydraulic-Spring Operated Mechanism, ifapplicable)	SET	1	
4.33	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.34	400kV GIS- Single phase of 3150A disconnecter switch including main circuit, enclosure, driving mechanism and support insulator etc., complete in all respect	Set	4	Each type, make & rating. (Note 1- The contractor shall supply spare for disconnecter switch to ensure one to one replacement of all disconnecter switch supplied as main equipment without any requirement of modification in fittings at site to cover all different types of disconnecter switch supplied. In case, quantity of supplied dis-connecter switch types (for one to one replacement) are more than the quantity mentioned in BPS for spare, the contractor shall supply these additional types of disconnecter switch without any additional price implication to POWERGRID and quantities of these additional type of disconnecter switch are deemed to be included in the quantities mentioned in BPS for spare disconnecter. Note 2 - In case, Dis-connector Switch (DS) & Earth Switch (ES) is provided in a same enclosure with common operating mechanism, then the module comprising of Dis-connector & Earth switch in single enclosure with common operating mechanism is to be provided under the head of spare Dis-connector only. Note 3- In case, Dis-connector Switch (DS) & Earth Switch (ES) is provided in a same enclosure with separate operating mechanism, then the module comprising of Dis-connector & Earth switch in single enclosure with separate operating mechanism is to be provided under the head of spare Dis-connector only.)
4.35	400KV GIS- SINGLE PHASE MAINTENANCE EARTHING SWITCH INCLUDING MAIN CIRCUIT, ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC., COMPLETE IN ALL RESPECT	Set	2	1 Set = 1 number of each type, make & rating. (NOTE 1 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH COMMON OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH COMMON OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY. NOTE 2 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH SEPARATE OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH SEPARATE OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY.)
4.36	400KV GIS - SINGLE PHASE FAST EARTHING SWITCH INCLUDING MAIN CIRCUIT, ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC., COMPLETE IN ALL RESPECT	Set	2	1 Set = 1 number of each type, make & rating. (NOTE 1 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH COMMON OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH COMMON OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY. NOTE 2 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH SEPARATE OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH SEPARATE OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY.)
4.37	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKING COILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS, RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONE OF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 400KV GIS DISCONNECTER SWITCH	SET	1	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.38	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKING COILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS, RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONE OF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 400KV GIS MAINTENANCE EARTH SWITCH	SET	1	
4.39	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKING COILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS, RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONE OF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 400KV GIS FAST EARTH SWITCH	SET	1	
4.40	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FOR DISCONNECTOR-400KV GIS	SET	2	
4.41	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FOR MAINTENANCE EARTHING SWITCH-400KV GIS	SET	2	
4.42	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FOR FAST EARTHING SWITCH (IF APPLICABLE)-400KV GIS	SET	2	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.43	DRIVE MECHANISM FOR 400KV GIS DISCONNECTOR SWITCH	SET	1	
4.44	DRIVE MECHANISM FOR 400KV GIS MAINTENANCE EARTH SWITCH	SET	1	
4.45	DRIVE MECHANISM FOR 400KV GIS FAST EARTHING SWITCH	SET	1	
4.46	MOTOR FOR DRIVE MECHANISM FOR 400KV GIS DISCONNECTOR SWITCH	Set	1	1 Set = 1 number of each type, make & rating
4.47	MOTOR FOR DRIVE MECHANISM FOR 400KVGIS MAINTENANCE EARTH SWITCH	Set	1	1 Set = 1 number of each type, make & rating
4.48	MOTOR FOR DRIVE MECHANISM FOR 400KV GIS FAST EARTHING SWITCH	Set	1	1 Set = 1 number of each type, make & rating
4.49	400KV GIS- SINGLE PHASE OF CURRENT TRANSFORMER (3 CORES, TYPE-CTA)WITH ASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALLRESPECT	Set	1	1 Set = 1 number of each type, make & rating

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
4.50	400KV GIS- SINGLE PHASE OF CURRENT TRANSFORMER (2 CORES, TYPE-CTB)WITH ASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALLRESPECT	Set	1	1 Set = 1 number of each type, make & rating
4.51	400KV GIS- SINGLE PHASE VT WITH ASSOCIATED ENCLOSURE COMPLETE IN ALLRESPECT	Set	1	1 Set = 1 number of each type, make & rating

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.00	SPARES- GIS : 220KV, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.01	220KV GIS-SF6 GAS PRESSURE RELIEF DEVICE ASSEMBLY OF EACH TYPE	Set	2	1 Set = 1 number of each type, make & rating
5.02	SF6 PRESSURE GAUGE CUM SWITCH /DENSITY MONITORS AND PRESSURESWITCH AS APPLICABLE, OF EACH TYPE-220KV GIS	SET	3	
5.03	COUPLING DEVICE FOR PRESSURE GAUGE CUM SWITCH FOR CONNECTINGGAS HANDLING PLANT OF EACH TYPE-220KV GIS	SET	2	
5.04	RUBBER GASKETS, Æ,â,-Å’OÃ,â,-Â•RINGS AND SEALS FOR SF6 GAS FOR GISENCLOSURE OF EACH TYPE-220KV GIS	SET	3	
5.05	220KV GIS-MOLECULAR FILTER FOR SF6 GAS WITH FILTER BAGS (5 % OF TOTALWEIGHT)	SET	1	
5.06	CONTROL VALVES FOR SF6 GAS OF EACH TYPE- 220KV GIS	SET	3	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.07	220KV GIS-SF6 GAS (5 % OF TOTAL GAS QUANTITY)	LOT	1	
5.08	LOCKING DEVICE TO KEEP THE DIS-CONNECTORS (ISOLATORS)AND EARTHING/FAST EARTHING SWITCHES (AS APPLICABLE) IN CLOSE OR OPENPOSITION IN CASE OF REMOVAL OF THE DRIVING MECHANISM-220KV GIS	SET	3	
5.09	UHF PD SENSORS OF EACH TYPE ALONG WITH BNC CONNECTOR FOR 245KV GIS	Set	5	1 Set = 1 number of each type, make & rating
5.10	220KV GIS-SUPPORT INSULATORS (GAS THROUGH) OF EACH TYPE (COMPLETE WITHMETAL RING ETC.) ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	Set	5	1 Set = 1 number of each type, make & rating
5.11	220KV GIS-GAS BARRIERS OF EACH TYPE (COMPLETE WITH METAL RING ETC.)ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	Set	5	1 Set = 1 number of each type, make & rating
5.12	220KV GIS- 2000 A SF6 TO AIR BUSHING COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating
5.13	LCC SPARES - AUX. RELAYS, CONTACTORS,PUSH BUTTONS, SWITCHES, LAMPS,ANNUNCIATION WINDOWS, MCB, FUSES,TIMERS, TERMINAL BLOCKS ETC. OF EACHTYPE & RATING-220kV GIS	SET	2	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.14	220KV GIS-ONE POLE OF 2000 A CIRCUIT BREAKER WITH INTERRUPTER, MAINCIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETE IN ALL RESPECT	SET	1	
5.15	220KV GIS-ONE POLE OF 3500A CIRCUIT BREAKER WITH INTERRUPTER, MAINCIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETE IN ALL RESPECT	SET	1	
5.16	Trip coil assembly with resistor for 245kV GIS Circuit Breaker (as applicable)	SET	3	
5.17	Closing coil assembly with resistor for 245kV GIS Circuit Breaker (as applicable)	SET	3	
5.18	RELAYS, POWER CONTACTORS, PUSH BUTTONS, TIMERS & MCBS ETC. (AS APPLICABLE) OF EACH TYPE FOR 220KV GIS CIRCUIT BREAKER	SET	1	
5.19	Auxiliary switch assembly of each type for 245kV GIS Circuit Breaker	SET	3	
5.20	220KV GIS CIRCUIT BREAKER-OPERATION COUNTER	Set	3	1 Set = 1 number of each type, make & rating



SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.21	220KV GIS CIRCUIT BREAKER-HYDRAULIC OPERATING MECHANISM WITH DRIVEMOTOR (FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
5.22	HYDRAULIC FILTER OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFPPLICABLE)- 220KV GIS CIRCUIT BREKAER	SET	1	
5.23	220KV GIS CIRCUIT BREAKER- HOSE PIPE OF EACH TYPE (AS APPLICABLE) (FORHYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
5.24	220KV GIS CIRCUIT BREAKER - N2 ACCUMULATOR (FOR HYDRAULIC OPERATEDMECHANISM, IF APPLICABLE)	SET	1	
5.25	VALVES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	
5.26	PIPE LENGTH (COPPER & STEEL) OF EACH SIZE & TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	
5.27	PRESSURE SWITCHES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	

SI. No.	Item Description	Unit		Remarks
4.00	<b>SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS</b>			
5.28	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	
5.29	220KV GIS CIRCUIT BREAKER-HYDRAULIC OIL (5% OF TOTAL OIL QUANTITY)(FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
5.30	PRESSURE RELIEF DEVICE OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM,IF APPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	
5.31	220KV GIS CIRCUIT BREAKER-COMPLETE SPRING OPERATING MECHANISMINCLUDING CHARGING MECHANISM ETC. (FOR SPRING OPERATED MECHANISM, IFAPPLICABLE)	SET	1	
5.32	220KV GIS CIRCUIT BREAKER- COMPLETE HYDRAULIC-SPRING OPERATINGMECHANISM INCLUDING CHARGING MECHANISM ETC. (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)	SET	1	
5.33	PRESSURE SWITCHES OF EACH TYPE (FOR HYDRAULIC-SPRING OPERATEDMECHANISM, IF APPLICABLE)-220KV GIS CIRCUIT BREAKER	SET	1	
5.34	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)-220KV GIS CIRCUIT BREKAER	SET	1	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.35	220kV GIS- Three phase of 2000A disconnecter switch including maincircuit, enclosure, driving mechanism and support insulator etc., complete in all respect	Set	4	Each type, make & rating. (Note 1- The contractor shall supply spare for disconnecter switch to ensure one to one replacement of all disconnecter switch supplied as main equipment without any requirement of modification in fittings at site to cover all different types of disconnecter switch supplied. In case, quantity of supplied dis-connecter switch types (for one to one replacement) are more than the quantity mentioned in BPS for spare, the contractor shall supply these additional types of disconnecter switch without any additional price implication to POWERGRID and quantities of these additional type of disconnecter switch are deemed to be included in the quantities mentioned in BPS for spare disconnecter. Note 2 - In case, Dis-conductor Switch (DS) & Earth Switch (ES) is provided in a same enclosure with common operating mechanism, then the module comprising of Dis-conductor & Earth switch in single enclosure with common operating mechanism is to be provided under the head of spare Dis-conductor only. Note 3- In case, Dis-conductor Switch (DS) & Earth Switch (ES) is provided in a same enclosure with separate operating mechanism, then the module comprising of Dis-conductor & Earth switch in single enclosure with separate operating mechanism is to be provided under the head of spare Dis-conductor only.)
5.36	220kV GIS- Three phase of 3500A disconnecter switch including maincircuit, enclosure, driving mechanism and support insulator etc., complete in all respect	Set	2	Each type, make & rating. (Note 1- The contractor shall supply spare for disconnecter switch to ensure one to one replacement of all disconnecter switch supplied as main equipment without any requirement of modification in fittings at site to cover all different types of disconnecter switch supplied. In case, quantity of supplied dis-conductor switch types (for one to one replacement) are more than the quantity mentioned in BPS for spare, the contractor shall supply these additional types of disconnecter switch without any additional price implication to POWERGRID and quantities of these additional type of disconnecter switch are deemed to be included in the quantities mentioned in BPS for spare disconnecter. Note 2 - In case, Dis-conductor Switch (DS) & Earth Switch (ES) is provided in a same enclosure with common operating mechanism, then the module comprising of Dis-conductor & Earth switch in single enclosure with common operating mechanism is to be provided under the head of spare Dis-conductor only. Note 3 - In case, Dis-conductor Switch (DS) & Earth Switch (ES) is provided in a same enclosure with separate operating mechanism, then the module comprising of Dis-conductor & Earth switch in single enclosure with separate operating mechanism is to be provided under the head of spare Dis-conductor only.)
5.37	220KV GIS- THREE PHASE MAINTENANCE EARTHING SWITCH INCLUDING MAINCIRCUIT, ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC., COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating. (NOTE 1 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH COMMON OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH COMMON OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY. NOTE 2 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH SEPARATE OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH SEPARATE OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY.)
5.38	220KV GIS - THREE PHASE FAST EARTHING SWITCH INCLUDING MAIN CIRCUIT, ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC., COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating. (NOTE 1 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH COMMON OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH COMMON OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY. NOTE 2 - IN CASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH SEPARATE OPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITH SEPARATE OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY.)

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.39	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKINGCOILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS,RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONEOF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 220KV GIS DISCONNECTORSWITCH	SET	1	
5.40	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKINGCOILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS,RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONEOF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 220KV GIS MAINTENANCE EARTH SWITCH	SET	1	
5.41	OPEN/CLOSE CONTACTOR ASSEMBLY, TIMERS, KEY INTERLOCK, INTERLOCKINGCOILS, RELAYS, PUSH BUTTONS, INDICATING LAMPS, POWER CONTACTORS,RESISTORS, FUSES, MCBS & DRIVE CONTROL CARDS ETC. (AS APPLICABLE) ONEOF EACH TYPE FOR ONE COMPLETE MOM BOX FOR 220KV GIS FAST EARTHINGSWITCH	SET	1	
5.42	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FORDISCONNECTOR-220KV GIS	SET	2	
5.43	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FORMAINTENANCE EARTHING SWITCH-220KV GIS	SET	2	

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.44	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FOR FASTEARTHING SWITCH (IF APPLICABLE)-220KV GIS	SET	2	
5.45	DRIVE MECHANISM FOR 220KV GIS DISCONNECTOR SWITCH	SET	1	
5.46	DRIVE MECHANISM FOR 220KV GIS MAINTENANCE EARTH SWITCH	SET	1	
5.47	DRIVE MECHANISM FOR 220KV GIS FAST EARTHING SWITCH	SET	1	
5.48	MOTOR FOR DRIVE MECHANISM FOR 220KV GIS DISCONNECTOR SWITCH	Set	1	1 Set = 1 number of each type, make & rating
5.49	MOTOR FOR DRIVE MECHANISM FOR 220KVGIS MAINTENANCE EARTH SWITCH	Set	1	1 Set = 1 number of each type, make & rating
5.50	MOTOR FOR DRIVE MECHANISM FOR 220KV GIS FAST EARTHING SWITCH	Set	1	1 Set = 1 number of each type, make & rating

SI. No.	Item Description	Unit		Remarks
4.00	SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
5.51	220KV GIS- SINGLE PHASE VT WITH ASSOCIATED ENCLOSURE COMPLETE IN ALLRESPECT	Set	1	1 Set = 1 number of each type, make & rating
5.52	220KV GIS- 01 NO. (EACH TYPE) OF 3500A SINGLE PHASE OF CURRENT TRANSFORMER (5 CORES) WITHASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating
5.53	220KV GIS- 01 NO. (EACH TYPE) OF 2000A SINGLE PHASE OF CURRENT TRANSFORMER (5 CORES) WITHASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALL RESPECT	Set	1	1 Set = 1 number of each type, make & rating

Sl. No.	Item Description	Unit		Remarks
6.0	<b>SPARES- GIS : REFERENCE UNIT PRICE FOR ADDITION / DELETION OF SUPPLY ITEMS</b> (Unit Prices of Individual Equipment included here or in manadatory spares are required for any Addition/Deletion of Equipment and replacement of damaged items. Bidder to ensure that the unit prices have a logical relationship with prices of assemblies in main items. Quoting for unit prices is mandatory and shall be considered for evaluation)			
6.01	SUPPLY- GIS: SPARES: 400KV, EXPANSION JOINTS	Set	1	1set= 1 nos. of ANY type and each rating.
6.02	SUPPLY- GIS: SPARES: 400KV, L-BEND	Set	1	1set= 1 nos. of ANY type and each rating.
6.03	SUPPLY- GIS: SPARES: 220KV, EXPANSION JOINTS	Set	1	1set= 1 nos. of ANY type and each rating.
6.04	SUPPLY- GIS: SPARES: 220KV, L-BEND	Set	1	1set= 1 nos. of ANY type and each rating.

TECHNICAL AMENDMENT 01 DATED 10/11/2025

ANNEXURE\_400&220KV\_GIS\_BOQ\_KAYLING, R.0

Sl. No.	SERVICES DESCRIPTION	Unit		Remarks
7.0	SERVICES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
7.01	SERVICES- 400KV GIS: SUPERVISION OF ERECTION OF GIS	Bays	11	Supervision of complete installation of the GIS system and its subsystems in full compliance with the Technical Specifications, including but not limited to the main bus, GIB within the GIS hall, LCC, earthing, structures, SF <sub>6</sub> gas filling works, cabling, and all related accessories and monitoring systems. This also includes verification of materials for proper on-site storage. The mode of measurement shall be per Circuit Breaker Bay. [Remark: GIS " <b>Bus Duct</b> " outside GIS Hall and " <b>SF6 to AIR Bushing</b> " are covered in separate BOQ line items below.]
7.02	SERVICES- 400KV GIS: SUPERVISION OF ERECTION OF GAS INSULATED BUS DUCT 1 PHASE	MTR	1500	Supervision of erection of GIB (outside GIS hall) complete in all respects as per the Technical Specifications. This item also covers earthing, SF <sub>6</sub> gas filling works, internal cabling with tray work, and associated structural works.
7.03	SERVICES- 400KV GIS: SUPERVISION OF ERECTION OF SINGLE PHASE, SF6 TO AIR BUSHING	SET	24	Supervision of erection of complete as per TS in all respect. Structure, Earthing, SF6 Gas Filing works, Internal Cabling with tray work including Structure Works are also deemed inclusive under this item.
7.04	SERVICES- 400KV GIS: TESTING & COMMISSIONING OF GIS	Bays	11	Testing and commissioning of the GIS system and its subsystems in full compliance with the Technical Specifications, including but not limited to the main bus, GIB within GIS Hall, LCC, and associated systems. All testing instruments, kits, tools, and plants (T&P), SF6 service cart, shall be arranged by the bidder on a returnable basis. Please refer to the relevant sections of the Technical Specifications for further details. [Remark: GIS Bus Duct outside the GIS hall and SF <sub>6</sub> -to-Air/Oil/Cable bushings (as applicable) are covered under separate BOQ line items below.]



Sl. No.	SERVICES DESCRIPTION	Unit		Remarks
7.05	SERVICES- 400KV GIS : TESTING & COMMISSIONING OF OF GAS INSULATED BUS DUCT 1 PHASE	MTR	1500	Testing and commissioning of GIB (outside GIS hall) complete in all respects as per the Technical Specifications. All special testing instruments, kits, tools, and plants (T&P) shall be arranged by the bidder on a returnable basis. Please refer to the relevant sections of the Technical Specifications for further details.
7.06	SERVICES- 400KV, TESTING & COMMISSIONING OF SINGLE PHASE, SF6 TO AIR BUSHING	SET	24	Testing & commissioning complete as per TS in all respect. All the testing instruments, kits, T&P etc. are to be arranged by bidder on returnable basis. Please refer relevant section of technical specification for details.
7.07	SERVICES- Controlled Switching Device for 420 kV, 3-ph Circuit Breaker	SET	9	Supervision of Installation and execution of Testing & commissioning complete as per TS in all respect. All the testing instruments, kits, T&P etc. are to be arranged by bidder on returnable basis. Please refer relevant section of technical specification for details.
7.08	SERVICES- 400KV GIS : FINAL SUCCESSFUL HV/ POWER FREQUENCY TESTING OF GIS INCLUDING ARRANGING OF HV TEST KIT ALONG WITH OPERATOR	Bays	11	Carrying out successful HV/Power Frequency Testing of the complete GIS and its subsystems as per IEC requirements. Arrangement of the HV test kit with operator (on a returnable basis) shall be in the bidder's scope. This includes all charges for the HV test kit, operator, accessories, and tools required for the completion of HV testing. The quoted price shall cover all GIS bays, including the main bus, GIB, SAB/SOB/SF <sub>6</sub> -to-Cable connections, and other common items as per the Technical Specifications, complete in all respects. Mobilization and demobilization of the HV test kit shall be considered once under this BOQ item. In case additional mobilization/demobilization is required for reasons not attributable to the bidder, the same shall be paid extra as per the applicable BOQ item.
7.09	SERVICES- 400KV GIS : INSULATION CO-ORDINATION STUDIES FOR GIS SYSTEM	LOT	1	1 Lot means Complete study report as per technical specification, Including VFTO report.

SI. No.	SERVICES DESCRIPTION	Unit		Remarks
8.0	SERVICES- GIS : 220KV, GAS INSULATED SWITCHGEAR (GIS) AS PER TS			
8.01	SERVICES- 220KV GIS: SUPERVISION OF ERECTION OF GIS	Bays	5	Supervision of complete installation of the GIS system and its subsystems in full compliance with the Technical Specifications, including but not limited to the main bus, GIB within the GIS hall, LCC, earthing, structures, SF <sub>6</sub> gas filling works, cabling, and all related accessories and monitoring systems. This also includes verification of materials for proper on-site storage. The mode of measurement shall be per Circuit Breaker Bay. [Remark: GIS " <b>Bus Duct</b> " outside GIS Hall and " <b>SF6 to AIR Bushing</b> " are covered in separate BOQ line items below.]
8.02	SERVICES- 220KV GIS: SUPERVISION OF ERECTION OF GAS INSULATED BUS DUCT 1 PHASE	MTR	250	Supervision of erection of GIB (outside GIS hall) complete in all respects as per the Technical Specifications. This item also covers earthing, SF <sub>6</sub> gas filling works, internal cabling with tray work, and associated structural works.
8.03	SERVICES- 220KV GIS: SUPERVISION OF ERECTION OF SINGLE PHASE, SF6 TO AIR BUSHING	SET	12	Supervision of erection of complete as per TS in all respect. Structure, Earthing, SF6 Gas Filing works, Internal Cabling with tray work including Structure Works are also deemed inclusive under this item.

Sl. No.	SERVICES DESCRIPTION	Unit		Remarks
8.04	SERVICES- 220KV GIS: TESTING & COMMISSIONING OF GIS	Bays	5	Testing and commissioning of the GIS system and its subsystems in full compliance with the Technical Specifications, including but not limited to the main bus, GIB within GIS Hall, LCC, and associated systems. All testing instruments, kits, tools, and plants (T&P), SF6 service cart, shall be arranged by the bidder on a returnable basis. Please refer to the relevant sections of the Technical Specifications for further details. [Remark: GIS Bus Duct outside the GIS hall and SF <sub>6</sub> -to-Air/Oil/Cable bushings (as applicable) are covered under separate BOQ line items below.]
8.05	SERVICES- 220KV GIS : TESTING & COMMISSIONING OF OF GAS INSULATED BUS DUCT 1 PHASE	MTR	250	Testing and commissioning of GIB (outside GIS hall) complete in all respects as per the Technical Specifications. All special testing instruments, kits, tools, and plants (T&P) shall be arranged by the bidder on a returnable basis. Please refer to the relevant sections of the Technical Specifications for further details.
8.06	SERVICES- 220KV, TESTING & COMMISSIONING OF SINGLE PHASE, SF6 TO AIR BUSHING	SET	12	Testing & commissioning complete as per TS in all respect. All the testing instruments, kits, T&P etc. are to be arranged by bidder on returnable basis. Please refer relevant section of technical specification for details.
8.07	SERVICES- 220KV GIS : FINAL SUCCESSFUL HV/ POWER FREQUENCY TESTING OF GIS INCLUDING ARRANGING OF HV TEST KIT ALONG WITH OPERATOR	Bays	5	Carrying out successful HV/Power Frequency Testing of the complete GIS and its subsystems as per IEC requirements. Arrangement of the HV test kit with operator (on a returnable basis) shall be in the bidder's scope. This includes all charges for the HV test kit, operator, accessories, and tools required for the completion of HV testing. The quoted price shall cover all GIS bays, including the main bus, GIB, SAB/SOB/SF <sub>6</sub> -to-Cable connections, and other common items as per the Technical Specifications, complete in all respects. Mobilization and demobilization of the HV test kit shall be considered once under this BOQ item. In case additional mobilization/demobilization is required for reasons not attributable to the bidder, the same shall be paid extra as per the applicable BOQ item.
8.08	SERVICES- 220KV GIS : INSULATION CO-ORDINATION STUDIES FOR GIS SYSTEM	LOT	1	1 Lot means Complete study report as per technical specification, Including VFTO report.

Sl. No.	SERVICES DESCRIPTION	Unit		Remarks
9.0	<b>SERVICES- GIS : REFERENCE UNIT PRICE FOR ADDITION / DELETION OF SERVICES:</b> (UNIT PRICES OF INDIVIDUAL SERVICES INCLUDED HERE ARE REQUIRED FOR ANY ADDITION/DELETION OF EQUIPMENT AND REPLACEMENT OF DAMAGED ITEMS. VENDOR TO ENSURE THAT THE UNIT PRICES HAVE A LOGICAL RELATIONSHIP WITH PRICES OF ASSEMBLIES IN MAIN ITEMS. QUOTING FOR UNIT PRICES IS MANDATORY AND SHALL BE CONSIDERED FOR EVALUATION)			
9.01	SERVICES- 400KV GIS: REF. UNIT PRICE OF GIS INDIVIDUAL ITEM/EQUIPMENT - SERVICES FOR SUPERVISION OF ERECTION OF GIS	MANDAY	10	Charges for repetition of services - (if required due to reasons not attributed to the bidder) This item will be executed only if repetition of services is required by BHEL.
9.02	SERVICES- 400KV GIS: REF. UNIT PRICE OF GIS INDIVIDUAL ITEM/EQUIPMENT - SERVICES FOR TESTING & COMMISSIONING OF GIS	MANDAY	10	Charges for repetition of services - (if required due to reasons not attributed to the bidder) This item will be executed only if repetition of services is required by BHEL.
	DEMOBILIZATION AND REMOBILIZATION CHARGES			
9.03	SERVICES- 400KV GIS: DEMOBILIZATION AND REMOBILIZATION CHARGES FOR GIS ERECTION SUPERVISION TEAM	Set	1	THIS BOQ ITEM SHALL BE PAYABLE IF REQUIRED FOR REASONS NOT ATTRIBUTABLE TO BIDDER.
9.04	SERVICES- 400KV GIS: DEMOBILIZATION AND REMOBILIZATION CHARGES FOR GIS TESTING & COMMISSIONING TEAM	Set	1	BOQ ITEM SHALL BE PAYABLE IF REQUIRED FOR REASONS NOT ATTRIBUTE TO BIDDER. HV TESTING IS NOT PART OF THIS ITEM.
9.05	SERVICES- 400KV GIS: DEMOBILIZATION & REMOBILIZATION CHARGES OF HV TEST KIT ALONG WITH OPERATOR	Lot	1	In this BOQ item, mobilization and demobilization chages for HV test kit is considered for second time or more , for reasons not attributable to bidder.