Bharat Heavy Electricals Limited

(A Govt. of India Undertaking)
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CORRIGENDUM - 08 TO NIT NO-63420

Subject: Corrigendum-08 to Tender enquiry for Pre-bid Tie up for Supply & Services of 400kV GIS for POWERGRID Khavda-1 Project.

Project : POWERGRID Khavda-1 PROJECT
Equipment / Item : SUPPLY & SERVICES OF 400 kV GIS.
Enquiry No/Date : NIT63420_61Q2200231 dated 28.02.2022
BHEL NIT NO : 63420
Original Tender due date : 09.03.2022

The Corrigendum is being issued by BHEL TBG against above mentioned NIT/ enquiry for incorporation of following:

TECHNICAL CORRIGENDUM - 2 (KHAVADA_KPS1)		Dated 28 April 2022
SL	**DESCRIPTION**	**REMARKS**
1	ANNEXURE-IV REV 01- DESCRIPTION OF 420KV GIS MODULES/EQUIPMENT	DESCRIPTION OF 420KV GIS MODULES/EQUIPMENT HAS BEEN REVISED AND ATTACHED
2	400KV GIS-ONE POLE OF 3150A CIRCUIT BREAKER WITH PIR WITH INTERRUPTER,MAIN CIRCUIT, ENCLOSURE AND OPERATING MECHANISM	ITEM DELETED
3	ANNEXURE_BOQ_KHAVADA_KPS1 (SPARES) REV.03	SPARES BILL OF QUANTITY REVISED, THE CHANGES MADE HAS BEEN HIGHLIGHTED BLUE.
4	SPECIAL NOTE FOR MANDATORY SPARES FOR GIS, NEW CLAUSE NO. 9.18 OF SECTION-PROJECT, REV. 01 IS ADDED	9.18 REQUIREMENT FOR MANDATORY SPARES FOR GIS: A. ANY EQUIPMENT WHICH IS NOT SUPPLIED AS MAIN EQUIPMENT OR PART OF MAIN EQUIPMENT, MANDATORY SPARE FOR THAT IS NOT APPLICABLE. B. IN CASE CONTRACTOR OFFERS CIRCUIT BREAKER, DIS-CONNECTOR, CURRENT TRANSFORMER, SF6/AIR BUSHING ETC. UNDER MAIN EQUIPMENT OF HIGHER RATING THAN EQUIPMENT RATING SPECIFIED IN THE SPECIFICATIONS, THE MANDATORY SPARE OF SAME HIGHER RATING OFFERED BY CONTRACTOR IDENTICAL TO MAIN EQUIPMENT OFFERED IN THE PACKAGE SHALL BE REQUIRED TO BE SUPPLIED AGAINST SPARES WITHOUT ANY COST IMPLICATION TO POWERGRID
5	WIND ZONE AS PER NBC 2016	WIND ZONE SHALL BE APPLICABLE AS PER NBC 2016
6	CLARIFICATION OF BUS ADAPTER EXTENSION MODULE	PLEASE REFER MODIFIED DESCRIPTION OF GIS BUS SECTION MODULE IN ANNEXURE-IV OF TS SECTION-PROJECT. ACCORDINGLY, BUS ADAPTER EXTENSION (INTERFACE) MODULE TO BE CONSIDERED WITH 420KV GIS BUS SECTION MODULE ON THE SIDE OF EXISTING GIS BUSBARS TO SUIT INTERCONNECTION WITH NEW BUS SECTIONS. FURTHER, END PIECE MODULE WITH NEW GIS BUSBAR MODULE FOR FUTURE EXPANSION AS PER MODULE DESCRIPTION IN TS.
7	SPECIAL NOTE	ALL TECHNICAL CLARIFICATION(S) FOR GIS PUBLISHED BY M/S POWERGRID WITH REFERENCE TO SUBJECT PROJECT WILL ALSO VALID FOR THIS TECHNICAL SPECIFICATION

Revised Price bid format (Rev.02) is also being furnished with this Corrigendum.

Due date offer submission/opening shall remain unchanged as **09.05.2022**

All other terms and conditions for this tender enquiry shall remain unchanged.

Bidder to ensure submission of offer on or before due.

Note: Tender ID in CPP Portal is **2022_BHEL_8893_1.**

Thanking you

Vineet Gupta
BHEL TBG, NOIDA

TECHNICAL CORRIGENDUM - 2 (KHAVADA_KPS1)		Dated 28 April 2022
SL	**DESCRIPTION**	**REMARKS**
1	ANNEXURE-IV REV 01- DESCRIPTION OF 420KV GIS MODULES/EQUIPMENT	DESCRIPTION OF 420KV GIS MODULES/EQUIPMENT HAS BEEN REVISED AND ATTACHED
2	400KV GIS-ONE POLE OF 3150A CIRCUIT BREAKER WITH PIR WITH INTERRUPTER,MAIN CIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETE IN ALLRESPECT	ITEM DELETED
3	ANNEXURE_BOQ_KHAVADA_KPS1 (SPARES) REV.03	SPARES BILL OF QUANTITY REVISED, THE CHANGES MADE HAS BEEN HIGHLIGHTED BLUE.
4	SPECIAL NOTE FOR MANDATORY SPARES FOR GIS, NEW CLAUSE NO. 9.18 OF SECTION-PROJECT, REV. 01 IS ADDED	9.18 REQUIREMENT FOR MANDATORY SPARES FOR GIS: A. ANY EQUIPMENT WHICH IS NOT SUPPLIED AS MAIN EQUIPMENT OR PART OF MAIN EQUIPMENT, MANDATORY SPARE FOR THAT IS NOT APPLICABLE. B. IN CASE CONTRACTOR OFFERS CIRCUIT BREAKER, DIS-CONNECTOR, CURRENT TRANSFORMER, SF6/AIR BUSHING ETC. UNDER MAIN EQUIPMENT OF HIGHER RATING THAN EQUIPMENT RATING SPECIFIED IN THE SPECIFICATIONS, THE MANDATORY SPARE OF SAME HIGHER RATING OFFERED BY CONTRACTOR IDENTICAL TO MAIN EQUIPMENT OFFERED IN THE PACKAGE SHALL BE REQUIRED TO BE SUPPLIED AGAINST SPARES WITHOUT ANY COST IMPLICATION TO POWERGRID
5	WIND ZONE AS PER NBC 2016	WIND ZONE SHALL BE APPLICABLE AS PER NBC 2016
6	CLARIFICATION OF BUS ADAPTER EXTENSION MODULE	PLEASE REFER MODIFIED DESCRIPTION OF GIS BUS SECTION MODULE IN ANNEXURE-IV OF TS SECTION-PROJECT. ACCORDINGLY, BUS ADAPTER EXTENSION (INTERFACE) MODULE TO BE CONSIDERED WITH 420KV GIS BUS SECTION MODULE ON THE SIDE OF EXISTING GIS BUSBARS TO SUIT INTERCONNECTION WITH NEW BUS SECTIONS. FURTHER, END PIECE MODULE WITH NEW GIS BUSBAR MODULE FOR FUTURE EXPANSION AS PER MODULE DESCRIPTION IN TS.
7	SPECIAL NOTE	ALL TECHNICAL CLARIFICATION(S) FOR GIS PUBLISHED BY M/S POWERGRID WITH REFERENCE TO SUBJECT PROJECT WILL ALSO VALID FOR THIS TECHNICAL SPECIFICATION

Annexure-IV, Rev01

Description of 420kV GIS modules/Equipment

A. 420kV GIS modules/Equipment: 420kV GIS modules/equipment shall be provided as per BPS and as per description given below:

a) Isolated phase, 420kV SF_6 gas-insulated metal enclosed bus bar module comprising of following:

i. Three (3) numbers of 4000A individual bus bars enclosures running across the length of the switchgear to interconnect each of the circuit breaker bay modules in one and a half breaker bus system.

ii. One (1) number 3-phase, single pole group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

iii. Three (3) numbers 1-phase Potential Transformers complete with manual operated isolating Switch/device.

iv. Gas monitoring devices, barriers, pressure switches, UHF PD Sensors, support structure etc. as required.

v. End Piece (Interface) modules with the isolating test link for Future extension of Bus bar module on one side. The end piece module shall be designed in such a way so that future GIS module may be tested without extending voltage to existing bus by removing the test link. End piece (interface) module for both the buses shall be in one alignment.

vi. Local Control Cubicle (if required separately).

b) GIS Bus Section Module:

420kV SF6 gas-insulated metal enclosed Bus Sectionaliser bay module, each set comprising of the following:-

i. One (1) number 3-phase, 4000A, SF6 insulated circuit breaker without PIR complete with operating mechanism.

ii. Three (3) numbers 1-phase, 4000A, 3-core (multi ratio), current transformers (CTA) on one side of circuit breaker.

iii. Three (3) numbers 1-phase, 4000A, 2-core (multi ratio), current transformers (CTB) on other side of circuit breaker.

iv. Two (2) numbers 3-phase, 4000A, single pole, group operated isolator switches, complete with manual and motor driven operating mechanisms.

v. Two (2) numbers 3-phase, single pole, group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

vi. Extension piece (Interface) modules, as required to extend existing busbars along with necessary GIS bus ducts to connect to bus section module.

vii. Gas monitoring devices, barriers, pressure switches, UHF PD Sensors, Support structures etc., as required.

viii. Local Control Cubicle

c) 420kV SF6 gas-insulated metal enclosed Line feeder bay module comprising of following:

i. One (1) number 3-phase, 3150A, SF_6 insulated circuit breaker #**with/without PIR** complete with operating mechanism.

ii. Three (3) numbers 1-phase, 3000A, 3-core (multi ratio), current transformers (CTA) on one side of circuit breaker.

iii. Three (3) numbers 1-phase, 3000A, 2-core (multi ratio), current transformers (CTB) on other side of circuit breaker.

iv. Three (3) numbers 3-phase, 3150A, single pole group operated isolator switches, complete with manual and motor driven operating mechanisms.

v. Two (2) numbers 3-phase, single pole group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

vi. One (1) number 3-phase, single pole high speed grounding switch, complete with group operated manual and motor driven operating mechanisms.

vii. Three (3) numbers 1-phase, 3150A, SF6 ducts inside GIS hall (up to the outer edge of the wall of GIS Hall)

viii. Gas monitoring devices, barriers, pressure switches, UHF PD Sensors, support structure etc. as required.

ix. Local Control Cubicle.

'#' As per BPS (Bis Price Schedule)

d) 420kV SF6 gas-insulated metal enclosed ICT bay module (for 400kV side of 765/400kV ICT) comprising of following:

i. One (1) number 3-phase, 3150A, SF6 insulated circuit breaker without PIR complete with operating mechanism.

ii. Three (3) numbers 1-phase, 3000A, 3-core (multi ratio), current transformers (CTA) on one side of circuit breaker.

iii. Three (3) numbers 1-phase, 3000A, 2-core (multi ratio), current transformers (CTB) on other side of circuit breaker.

iv. Two (2) numbers 3-phase, 3150A, single pole, group operated isolator switches, complete with manual and motor driven operating mechanisms.

v. Two (2) numbers 3-phase, single pole, group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

vi. Three (3) numbers 1-phase, 3150A, single pole, individual pole operated isolator switches, complete with manual and motor driven operating mechanisms.

vii. Three (3) numbers 1-phase, single pole, individual pole operated safety grounding switches, complete with manual and motor driven operating mechanisms.

viii. Three Nos. 1-phase, 3150A, individual pole operated isolator switches, complete with manual and motor driven operating mechanisms for switching of spare Transformer through 400kV auxiliary bus. The isolator must meet the operational requirement in terms of Phase-Phase insulation withstand capability.

ix. Three (3) numbers 1-phase, 3150A, SF6 ducts inside GIS hall (upto the outer edge of the wall of GIS Hall)

x. Gas monitoring devices, barriers, pressure switches, UHF PD Sensors, support structure etc. as required.

xi. Local Control Cubicle.

e) 420kV SF6 gas insulated metal enclosed Bus reactor module comprising of following:

i. One (1) number 3-phase, 3150A, SF6 insulated circuit breaker without PIR complete with operating mechanism.

ii. Three (3) numbers 1-phase, 3000A, 3-core (multi ratio), current transformers (CTA) on one side of circuit breaker.

iii. Three (3) numbers 1-phase, 3000A, 2-core (multi ratio), current transformers (CTB) on other side of circuit breaker.

iv. Three (3) numbers 3-phase, 3150A, single pole group operated isolator switches, complete with manual and motor driven operating mechanisms

v. Three (3) numbers 3-phases, single pole group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

vi. Three (3) numbers1-phase, 3150A, SF6 ducts inside the GIS hall (up to the outer edge of the wall of GIS Hall)

vii. Gas monitoring devices, barriers, pressure switches, UHF PD sensors, support structures etc. as required.

viii. Local Control cubicle.

Description of 420kV GIS modules/Equipment

f) 420kV SF6 gas-insulated metal enclosed Tie bay module comprising of following:

i. One (1) number 3-phase, 3150A, SF_6 insulated circuit breaker **#with/without PIR** complete with operating mechanism.

ii. Three (3) numbers 1-phase, 3000A, 3-core (multi ratio), current transformers (CTA) on one side of circuit breaker.

iii. Three (3) numbers 1-phase, 3000A, 3-core (multi ratio), current transformers (CTA) on other side of circuit breaker.

iv. Two (2) numbers 3-phase, 3150A single pole, group operated isolator switches, complete with manual and motor driven operating mechanisms.

v. Two (2) numbers 3-phase, single pole group operated safety grounding switches, complete with manual and motor driven operating mechanisms.

vi. Gas monitoring devices, barriers, pressure switches, UHF PD Sensors, support structure etc. as required.

vii. Local Control Cubicle.

'#' As per BPS (Bis Price Schedule)

c) Set of isolated phase, 420kV SF6 gas-insulated metal enclosed Auxiliary bus bars module for connection with spare ICT comprising of following:

i. One (1) number 1-Phase, 3150A, Auxiliary bus bar enclosure running across the length of the switch gear to inter-connect the spare unit of ICT with all ICT bay modules under present scope through GIS ducts.

ii. One (1) number 1-phase, single pole operated safety grounding switch, complete with manual and motor driven operating mechanisms.

iii. One (1) number 1-phase, 3150A, SF6 ducts inside the GIS hall (up to the outer edge of the wall of GIS Hall)

iv. Gas monitoring devices, barriers, pressure switches, UHF PD sensors, support structure etc. as required.

v. End Piece (Interface) module with the test link for future extension. The end piece module shall be designed in such a way so that future GIS module may be tested without extending voltage to existing bus by removing the test link.

B. 420kV Gas Insulated Bus Ducts (GIB):

For making outdoor overhead connections, 420kV Single Phase enclosed Sf6 Gas Insulated Bus Duct (including support structure, gas monitoring device, gas barrier, UHF PD Sensor etc.) shall be provided and the same shall be paid as per unit rate quoted in Bid Price Schedule. This outdoor bus duct shall be measured from outer edge of the wall of the respective GIS Hall/Building. SF6 gas duct inside GIS building are part of respective GIS Module.

The GIB duct length shall be optimized further meeting present & future bay requirements without affecting the switchyard arrangement, bay orientation and any of the specified functional requirements.

C. 420kV Gas Insulated SF6 to Air Termination:

420kV, 3150A, 1-phase SF6 to air bushings along with terminal connectors & support structure, foundation bolts, fasteners etc. for outdoor connections in air.

ANNEXURE_BOQ_KHAVADA_KPS1 (SPARES) Rev.03 (28/04/2022)

SL	DESCRIPTION	UNIT	QTY	REMARKS
2	**SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS**			
2.01	400KV GIS-SF6 GAS PRESSURE RELIEF DEVICE ASSEMBLY OF EACH TYPE	SET	1	
2.02	SF6 PRESSURE GAUGE CUM SWITCH /DENSITY MONITORS AND PRESSURESWITCH AS APPLICABLE, OF EACH TYPE-400KV GIS	SET	2	
2.03	COUPLING DEVICE FOR PRESSURE GAUGE CUM SWITCH FOR CONNECTINGGAS HANDLING PLANT OF EACH TYPE-400KV GIS	SET	1	
2.04	RUBBER GASKETS, O-RINGS AND SEALS FOR SF6 GAS FOR GISENCLOSURE OF EACH TYPE-400KV GIS	SET	2	
2.05	400KV GIS-MOLECULAR FILTER FOR SF6 GAS WITH FILTER BAGS (5 % OF TOTALWEIGHT)	SET	1	
2.06	CONTROL VALVES FOR SF6 GAS OF EACH TYPE-400KV GIS	SET	2	
2.07	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	2	
2.08	UHF PD SENSORS OF EACH TYPE ALONG WITH BNC CONNECTOR FOR 420KV GIS	SET	3	
2.09	400KV GIS-SUPPORT INSULATORS (GAS THROUGH) OF EACH TYPE (COMPLETE WITHMETAL RING ETC.) ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	SET	3	
2.1	400KV GIS-GAS BARRIERS OF EACH TYPE (COMPLETE WITH METAL RING ETC.)ALONG WITH ASSOCIATED CONTACTS AND SHIELDS	SET	3	
2.11	400KV GIS- 3150A SF6 TO AIR BUSHING COMPLETE IN ALL RESPECT	SET	1	
2.12	LCC SPARES - AUX. RELAYS, CONTACTORS,PUSH BUTTONS, SWITCHES,LAMPS,ANNUNCIATION WINDOWS, MCB, FUSES,TIMERS, TERMINAL BLOCKS ETC. OF EACH TYPE & RATING-400kV GIS	SET	1	
2.13	400KV GIS-ONE POLE OF 3150A CIRCUIT BREAKER WITHOUT PIR WITHINTERRUPTER, MAIN CIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETEIN ALL RESPECT	SET	1	
2.14	400KV GIS-ONE POLE OF 3150A CIRCUIT BREAKER **WITH PIR** WITH INTERRUPTER,MAIN CIRCUIT, ENCLOSURE AND OPERATING MECHANISM COMPLETE IN ALL RESPECT	SET	0	Remark: This item is deleted

SL	DESCRIPTION	UNIT	QTY	REMARKS
2	**SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS**			
2.15	Trip coil assembly with resistor for420kV GIS Circuit Breaker (as applicable)	SET	3	
2.16	Closing coil assembly with resistor for420kV GIS Circuit Breaker (as applicable)	SET	3	
2.17	RELAYS, POWER CONTACTORS, PUSH BUTTONS, TIMERS & MCBS ETC. (ASAPPLICABLE) OF EACH TYPE FOR 400KV GIS CIRCUIT BREAKER	SET	1	
2.18	Auxiliary switch assembly of each type for 420kV GIS Circuit Breaker	SET	1	
2.19	400KV GIS CIRCUIT BREAKER-OPERATION COUNTER	SET	1	
2.2	400KV GIS CIRCUIT BREAKER-HYDRAULIC OPERATING MECHANISM WITH DRIVEMOTOR (FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
2.21	HYDRAULIC FILTER OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFPPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.22	400KV GIS CIRCUIT BREAKER- HOSE PIPE OF EACH TYPE (AS APPLICABLE) (FORHYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
2.23	400KV GIS CIRCUIT BREAKER - N2 ACCUMULATOR (FOR HYDRAULIC OPERATEDMECHANISM, IF APPLICABLE)	SET	1	
2.24	VALVES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.25	PIPE LENGTH (COPPER & STEEL) OF EACH SIZE & TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.26	PRESSURE SWITCHES OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM, IFAPPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.27	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULICOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.28	400KV GIS CIRCUIT BREAKER-HYDRAULIC OIL (5% OF TOTAL OIL QUANTITY)(FOR HYDRAULIC OPERATED MECHANISM, IF APPLICABLE)	SET	1	
2.29	PRESSURE RELIEF DEVICE OF EACH TYPE (FOR HYDRAULIC OPERATED MECHANISM,IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.3	400KV GIS CIRCUIT BREAKER-COMPLETE SPRING OPERATING MECHANISMINCLUDING CHARGING MECHANISM ETC. (FOR SPRING OPERATED MECHANISM, IFAPPLICABLE)	SET	1	

SL	DESCRIPTION	UNIT	QTY	REMARKS
2	**SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS**			
2.31	400KV GIS CIRCUIT BREAKER- COMPLETE HYDRAULIC-SPRING OPERATINGMECHANISM INCLUDING CHARGING MECHANISM ETC. (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)	SET	1	
2.32	PRESSURE SWITCHES OF EACH TYPE FOR420KV GIS CIRCUIT BREAKER (ForHydraulic-Spring Operated Mechanism, ifapplicable)	SET	1	
2.33	PRESSURE GAUGE WITH COUPLING DEVICE OF EACH TYPE (FOR HYDRAULIC-SPRINGOPERATED MECHANISM, IF APPLICABLE)-400KV GIS CIRCUIT BREKAER	SET	1	
2.34	400kV GIS- Single phase of 3150Adisconnector switch including maincircuit, enclosure, driving mechanismand support insulator etc., complete inall respect (PLEASE REFER ADDITIONAL NOTES IN REMARK COLUMN)	SET	2	(Note 1- The contractorshall supply spare for disconnectorswitch to ensure one to one replacementof all disconnector switch supplied asmain equipment without any requirementof modification in fittings at site tocover all different types ofdisconnector switch supplied. In case,quantity of supplied dis-connectorswitch types (for one to onereplacement) are more than the quantitymentioned in BPS for spare, thecontractor shall supply theseadditional types of disconnector switchwithout any additional priceimplication to POWERGRID and quantitiesof these additional type ofdisconnector switch are deem to beincluded in the quantities mentioned inBPS for spare disconnector. Note 2 - Incase, Dis-connector Switch (DS) & EarthSwitch (ES) is provided in a sameenclosure with common operatingmechanism, then the module comprisingof Dis-connector & Earth switch insingle enclosure with common operatingmechanism is to be provided under thehead of spare Dis-connector only. Note3- In case, Dis-connector Switch (DS)&Earth Switch (ES) is provided in asame enclosure with separate operatingmechanism, then the module comprisingof Dis-connector & Earth switch insingle enclosure with separateoperating mechanism is to be providedunder the head of spare Dis-connectoronly.)
2.35	400KV GIS- SINGLE PHASE MAINTENANCE EARTHING SWITCH INCLUDING MAINCIRCUIT, ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC.,COMPLETE IN ALL RESPECT	SET	1	

SL	DESCRIPTION	UNIT	QTY	REMARKS
2	**SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS**			
2.36	400KV GIS - SINGLE PHASE FAST EARTHING SWITCH INCLUDING MAIN CIRCUIT,ENCLOSURE, DRIVING MECHANISM AND SUPPORT INSULATOR ETC., COMPLETE INALL RESPECT (PLEASE REFER ADDITIONAL NOTES IN REMARK COLUMN)	SET	1	(NOTE 1 - IN CASE, DIS-CONNECTOR SWITCH (DS) &EARTH SWITCH (ES) IS PROVIDED IN A SAME ENCLOSURE WITH COMMONOPERATING MECHANISM, THEN THE MODULE COMPRISING OF DIS-CONNECTOR &EARTH SWITCH IN SINGLE ENCLOSURE WITH COMMON OPERATING MECHANISM IS TOBE PROVIDED UNDER THE HEAD OF SPARE DIS-CONNECTOR ONLY. NOTE 2 - INCASE, DIS-CONNECTOR SWITCH (DS) & EARTH SWITCH (ES) IS PROVIDED IN ASAME ENCLOSURE WITH SEPARATE OPERATING MECHANISM, THEN THE MODULECOMPRISING OF DIS-CONNECTOR & EARTH SWITCH IN SINGLE ENCLOSURE WITHSEPARATE OPERATING MECHANISM IS TO BE PROVIDED UNDER THE HEAD OF SPAREDIS-CONNECTOR ONLY.)
2.37	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 400KV GIS DISCONNECTORSWITCH	SET	1	
2.38	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 400KV GIS MAINTENANCE EARTHSWITCH	SET	1	
2.39	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 400KV GIS FAST EARTHINGSWITCH	SET	1	
2.4	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FORDISCONNECTOR-400KV GIS	SET	1	
2.41	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FORMAINTENANCE EARTHING SWITCH-400KV GIS	SET	1	
2.42	LIMIT SWITCHES AND AUX. SWITCHES FOR ONE COMPLETE MOM BOX FOR FASTEARTHING SWITCH (IF APPLICABLE)-400KV GIS	SET	1	
2.43	DRIVE MECHANISM FOR 400KV GIS DISCONNECTOR SWITCH	SET	1	
2.44	DRIVE MECHANISM FOR 400KV GIS MAINTENANCE EARTH SWITCH	SET	1	
2.45	DRIVE MECHANISM FOR 400KV GIS FAST EARTHING SWITCH	SET	1	

SL	DESCRIPTION	UNIT	QTY	REMARKS
2	**SPARES- GIS : 400KV, 63KA FOR 1S, GAS INSULATED SWITCHGEAR (GIS) AS PER TS**			
2.46	MOTOR FOR DRIVE MECHANISM FOR 400KV GIS DISCONNECTOR SWITCH	SET	1	
2.47	MOTOR FOR DRIVE MECHANISM FOR 400KVGIS MAINTENANCE EARTH SWITCH	SET	1	
2.48	MOTOR FOR DRIVE MECHANISM FOR 400KV GIS FAST EARTHING SWITCH	SET	1	
2.49	400KV GIS- SINGLE PHASE OF CURRENT TRANSFORMER (3 CORES, TYPE-CTA)WITH ASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALL RESPECT	SET	1	
2.5	400KV GIS- SINGLE PHASE OF CURRENT TRANSFORMER (2 CORES, TYPE-CTB)WITH ASSOCIATED ENCLOSURE AND PRIMARY CONDUCTOR COMPLETE IN ALL RESPECT	SET	1	
2.51	400KV GIS- SINGLE PHASE VT WITH ASSOCIATED ENCLOSURE COMPLETE IN ALL RESPECT	SET	1	
2.52	400KV GIS-SF6 GAS (5 % OF TOTAL GAS QUANTITY)	LOT	1	5 % OF TOTAL GAS QUANTITY IS TO BE SUPPLIED AS SPARE IN NON-RETURNABLE CYLINDERS. PLEASE NOTE: IN THE EVENT OF CHANGE IN GIS SCOPE / SF6 GAS QUANTITY, ANY ADDITIONAL PAYMENT SHALL NOT BE ADMISSIBLE. BIDDER TO QUOTE ACCORDINGLY.