

PRICE BID SCHEDULE

BHEL ENQUIRY NO:
PROJECT: SAPDC/SJVN ARUN-III PROJECT
ITEM: 400KV GIS & ASSOCIATED EQUIPMENTS

Sr. NO	Description	Detailed Description	Unit	Qty	HSN / SAC Code	Unit Ex-works /prices	Total Ex-Works/ prices	% of GST on Ex-works (vendor to mention % of GST applicable in respect of each line item)	GST on total Ex-works prices	Unit Freight & Insurance	Total Freight & Insurance	% of GST on F&I (vendor to mention % of GST applicable in respect of each line item)	GST on Total Freight & Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8 = 5 X 7	9	10	11	12 = 5 X 11	13	14	15 = 8 + 10 + 12 +14
								Note: Bidder to quote % of GST for services (item no: G,H,J)		NOT APPLICABLE FOR SERVICE CHARGES				
A	Supply Item : 400kV, 2500A , 50kA for 1 second GIS double bus scheme as per attached single line diagram drawing no. TB -405-510-001. Comprising of Items (A.1-A.24)	The 400kV SF6 Gas Insulated Switchgear shall have three single phase construction, Double Main Bus Scheme. 400kV, 2500A, 50kA for 1 sec Double Bus bar GIS comprising of but not limited to the following modules/bays :- a. 4 nos. Fully Equipped GT Incomer Bays including Interfacing GIS Module in GT Cavern (Fully Equipped Bay) b. 2 nos.Fully Equipped Outgoing line Bays c. 2 nos. Fully Equipped Line Reactor Bays d. 1 no. Fully Equipped Bus Reactor Bay e. 1 no. Fully Equipped Bus Coupler Bay f. 2 no. Bus PT bays, Bus Extension Module complete with local control cabinet (LCC), cable etc. Typical Bay includes Busbar, Circuit Breaker, Disconnecter , Maintenance Earthing Switch, High Speed Earthing Switch, Current Transformer, Voltage Transformer, Surge Arrestor, SF6 to EHV Cable termination Module,SF6/Air termination module,SF6 to Oil Termination Module , Gas Monitoring Devices,Online PD Monitoring System, Pressure Switches etc. Continuous on-line monitoring and diagnostic systems in all individual bays (including LCD display) to monitor partial discharge, internal arcing, gas density, gas pressure, leakage, moisture etc., operating parameters such as current, voltage, temperature etc. complete with sensors, control / processor units, wiring/cabling in all respects. Refer attached Single Line Diagram drawing no. TB -405-510-001 for details of equipments and bays. The Switchgear shall be complete with all necessary terminal boxes, inspection windows, SF6 gas filling valve , static filters, density switches , safety diaphragm, interconnecting cabling & wirings, grounding connections, gas monitoring systems and pipings, trays, support structures , walkways,Bellows and Compensators like Lateral mounting units, Axial compensators, Parallel compensators,Tolerance Compensators, Vibration compensators, etc. The scope of supply shall also include all erection and mounting hardware and interconnecting cables between GIS to LCC and between LCC to LCC including Cable Trays, Tags, Glands, ferrules, Lugs etc. Refer Section 2 and Single Line Diagram for details.												
A.1	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - GENERATOR TRANSFORMER GIS BAY	400kV,2500A, 50 kA for 1 second, SF6 gas insulated GT Feeder Bay Module each set comprising of following but not limited to:- a) One set of 2500A, One nos. of 3-phase SF6 insulated circuit breaker without preinsertion resistor but with CSD, complete with operating mechanism suitable for 3 phase operation. b) Three nos. Single-phase,multi ratio, current transformers as per single line diagram.(CT disposition shall be as per SLD) c) Three nos. Single phase , SF6 to OIL Termination Module on GT. d) Six nos. Single Phase ,SF6 to EHV Cable Module e) Three nos. Single Phase ,Interfacing Modules . f) Two nos. of 3-phase, 2500A, group operated Disconnecter switches, complete with manual and motor driven operating mechanisms. g) One nos. of 3-phase, group operated safety grounding switches, complete with manual and motor driven operating mechanisms. h) One no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. i) Three Nos. of single phase 336kV, 20kA , SF6 gas insulated metal enclosed zinc oxide surge arrestors. j) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. k) Barrier cones, mechanism box and other items as required. l) Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and Single Line Diagram for Details. Note : 1.The Bidder shall quote for CSD of Circuit Breaker separately at Line Item No - A.16 in the BOQ 2.The Bidder shall quote for the SF6 to OIL Termination Module on GT separately at Line Item No. A.12 in the BOQ. 3.The Bidder shall quote for the SF6 to EHV Cable Termination Module separately at Line Item No. A.11 in the BOQ. 4.The Bidder shall quote for the Interfacing GIS Module separately at Line Item No. A.10 in the BOQ.	Set	4										
A.2	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - LINE GIS BAY WITH PIR	400kV,2500A, 50KA for 1 second, SF6 gas insulated metal enclosed Line Feeder Bay Module each set comprising of following but not limited to :- a) One set of 2500A, One nos. of 3-phase SF6 insulated circuit breaker with preinsertion resistor and with CSD ,complete with operating mechanism (suitable for 1 & 3 phase auto reclose). b) Three nos. single phase,multi ratio,current transformers as per single line diagram.(CT disposition shall be as per SLD). c) Three nos. Single phase SF6 to Air Termination Bushing. d) Three nos. of 3-phase, 2500A, group operated Disconnecter switches, complete with manual and motor driven operating mechanisms. e) Three nos. of 3-phase, group operated safety grounding switches,complete with manual and motor driven operating mechanisms. f) One no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. g) Three Nos. of single phase 336kV, 20kA , SF6 gas insulated metal enclosed zinc oxide surge arrestors. h) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. i) Barrier cones, mechanism box and other items as required. j) GIS Duct inside the GIS building from Switchgear upto centerline of the Building wall through which the GIS duct passes. k)Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details. Note : 1. The Bidder shall quote for CSD of Circuit Breaker separately at Line Item No - A.16 in the BOQ 2. The Bidder shall quote for SF6 to Air Termination Module separately at Line Item No - A.14 in the BOQ.	Set	2										

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A.3	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - LINE REACTOR GIS BAY WITH PIR	400kV,2500A,50KA for 1 second, SF6 gas-insulated metal enclosed Line Reactor bay module each set comprising of following but not limited to :- a) One set of 2500A,One nos. of 3-phase SF6 insulated circuit breaker with preinsertion resistor and with CSD, complete with operating mechanism. b) Three nos. Single-phase,multi ratio, current transformers as per single line diagram.(CT disposition shall be as per SLD) c) Three no. Single Phase ,SF6 to Oil Termination Module on the Line Reactor. d) One nos. of 3-phase, 2500A, group operated Disconnector switches, complete with manual and motor driven operating mechanisms. e) One nos. of 3-phase, group operated safety grounding switches, complete with manual and motor driven operating mechanisms. f) One no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. g) Three Nos. of single phase 336kV, 20kA , SF6 gas insulated metal enclosed zinc oxide surge arrestors . h) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. i) Barrier cones, mechanism box and other items as required. j) GIS Duct inside the GIS building upto centerline of the Building wall through which the GIS duct passes. k) Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details. Note : 1.The Bidder shall quote for CSD of Circuit Breaker separately at Line Item No - A.16 in the BOQ 2.The Bidder shall quote for the SF6 to OIL Termination Module on Line/Bus Reactor separately at Line Item No. A.13 in the BOQ.	Set	2											
A.4	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - BUS REACTOR GIS BAY	400kV, 50KA for 1 second, SF6 gas-insulated metal enclosed Bus Reactor Bay module each set comprising of following but not limited to :- a) One set of 2500A, One nos. of 3-phase SF6 insulated circuit breaker without preinsertion resistor but with CSD , complete with operating mechanism b) Three nos. Single-phase,multi ratio, current transformers as per single line diagram.(CT disposition on either side of breaker/bus or elsewhere shall be as per SLD) c) Three nos. single phase SF6 to Oil Termination Module on the Bus Reactor . d) Two nos. of 3-phase, 2500A, group operated Disconnector switches, complete with manual and motor driven operating mechanisms. e) One nos. of 3-phase, group operated safety grounding switches, complete with manual and motor driven operating mechanisms. f) One no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. g) Three Nos. of single phase 336kV, 20kA , SF6 gas insulated metal enclosed zinc oxide surge arrestors . h) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. i) Barrier cones, mechanism box and other items as required. j) GIS Duct inside the GIS building upto centerline of the Building wall through which the GIS duct passes. k) Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details. Note : 1.The Bidder shall quote for CSD of Circuit Breaker separately at Line Item No - A.16 in the BOQ 2.The Bidder shall quote for the SF6 to OIL Termination Module on Bus Reactor separately at Line Item No. A.13 in the BOQ.	Set	1											
A.5	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - BUS COUPLER GIS BAY	400kV, 50KA for 1 second, SF6 gas-insulated metal enclosed Bus-Coupler bay module comprising of following but not limited to :- a) One set of 2500A,One nos. of 3-phase SF6 insulated circuit breaker without preinsertion resistor, complete with operating mechanism suitable for 3 phase operation. b) Three nos. single -phase,Single-phase,multi ratio, current transformers as per single line diagram. (CT disposition on either side of breaker/bus or elsewhere shall be as per SLD) c) Two nos. of 3-phase, 2500A, group operated Disconnector switches, complete with manual and motor driven operating mechanisms. d) Two nos. of 3-phase, group operated safety grounding switches, complete with manual and motor driven operating mechanisms. e) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. f) Barrier cones, mechanism box and other items as required. g) GIS duct inside the GIS Building. h) Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details. Note : 1.The Bidder shall quote for CSD of Circuit Breaker separately at Line Item No - A.16 in the BOQ	Set	1											
A.6	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, BUSBAR MODULE	These shall be inserted, as required, between sections of bus bars, CGI bus duct connections, and shall be used to create electrical connectivity of BUS BARS considering the thermal expansion, accomodating of GIS Modules due to shifting of GIS bays arising due to civil and archetectural requirements or expansion joint in the building that houses GIS . Bidder shall consider the bus bar modules compatible with the Bellows/Compensators like Lateral mounting units, Axial compensators,Parallel compensators,Tolerance Compensators,Vibration compensators etc. Refer Section-2 and SLD for Details.	set	2											
A.7	SUPPLY- GIS : 400KV, 50KA FOR 1S, DOUBLE MAIN BUS SCHEME - BUS MEASUREMENT GIS BAY/ VOLTAGE TRANSFORMER BAY	400kV, 50 kA for 1 sec, SF6 gas insulated Bus VT bay module connected to Main Bus Bars. Each set shall be complete in all respects and comprising of following but not limited to, a) Three nos. single phase Voltage transformers . b) One no. of 3-phase,group operated Disconnector switches, complete with manual and motor driven operating mechanisms. c) One no. of 3-phase, group operated safety grounding switches, complete with manual and motor driven operating mechanisms for each phase. d) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. e) Any other item required to complete in all respects but not limited to above. Refer Section-2 and SLD for Details.	Set	2											
A.8	SUPPLY- GIS : 50KA FOR 1S, RATING (AS PER TS), SURGE ARRESTOR INCLUDING SURGE COUNTER FOR GIS BUS	Three nos of single plase 336kV,20kA, SF6 gas insulated, metal enclosed surge arrestors of the gapless metal oxide, heavy-duty type. Refer Section 2 and SLD for details.	Set	2											

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A.9	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, DOUBLE MAIN BUS SCHEME - BUS EXTENSION MODULE	400kV,2500A, 50 kA for 1 sec, SF6 gas-insulated metal enclosed bus extension module. Each set shall be complete in all respects and comprising of following but not limited to, a) One no. of 3-phase, 2500A, group operated Disconnector switches, complete with manual and motor driven operating mechanisms. b) Two no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. c) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. d) Any other item required to complete in all respects but not limited to above. Refer Section-2 and SLD for Details.	Set	2										
A.10	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, INTERFACING GIS MODULE	400kV,2500A,50kA for 1 sec , 3 x 1 phase SF6 gas-insulated metal enclosed Interfacing GIS Module near GT in GT Cavern Area . Each shall be complete in all respects and comprising of following but not limited to, a) Three nos. Single-phase,multi ratio, current transformers as per single line diagram. (CT disposition on bus or elsewhere shall be as per SLD) b) Three Nos. of single phase 336kV, 20kA , SF6 gas insulated metal enclosed zinc oxide surge arrestors . c) One no. of 3-phase, high speed make proof grounding switch, complete with group operated manual and motor driven operating mechanisms for each phase. d) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. e) Barrier cones, mechanism box and other items as required. f) Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details.	Set	4										
A.11	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, SF6 TO EHV CABLE CONNECTION MODULE	SF6 gas-insulated metal enclosed module shall be Single Phase and shall be used in GT bay Modules. Each shall be complete in all respects and comprising of following but not limited to, (a) 400kV XLPE Cable to SF6 Bushing Module shall be of the plug-in type with dry-type or fluid-filled terminations. The interfaces conform to IEC standards. A removable link, which disconnects and isolates the GIS from the cable during high-voltage test for convenience and ease of operations shall also be provided (If applicable). (b) Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. (c) All the Cable connection module shall be suitable for connection of 400 kV XLPE cable (d) Any other item required to complete in all respects but not limited to above. The bidder shall have to make provision in termination module for fixing the cable / termination kit (male/ female) in line with IEC62271-209 for scope division, which shall be supplied by BHEL/its vendor. Bidder has to supply GIS with cable termination modules for all GT Bays (In GIS building and in GT Cavern area) Refer Section-2 and SLD for Details.	Nos	24										
A.12	SUPPLY- GIS : 400KV, 50KA FOR 1S, SF6 TO OIL CONNECTION MODULE (TYPE-A)	a. Single phase ,400kV , 2500A , termination module for connecting <u>Oil Bushing on Generator Transformer</u> to GIS SF6 bus duct. b. Scope of supply and split of scope division of GIS Bidder shall be as per IEC 62271-211. c. Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. d. Barrier cones, mechanism box and other items as required. e. Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details.	Nos.	12										
A.13	SUPPLY- GIS : 400KV, 50KA FOR 1S, SF6 TO OIL CONNECTION MODULE (TYPE-B)	a.Single phase ,400kV , 2500A , termination module for connecting <u>Oil Bushing on Line/Bus Reactor</u> to GIS SF6 bus duct. b.Scope of supply and split of scope division of GIS Bidder shall be as per IEC 62271-211. c.Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. d. Barrier cones, mechanism box and other items as required. e. Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details.	Nos.	9										
A.14	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, SF6 TO AIR BUSHING	Single phase 400 kV , 2500A ,SF6 to Air Bushing shall be supplied for the air termination of the GIS shall be as per IEC. a.Single phase ,400kV , 2500A , termination module for terminating GIS SF6 bus duct in Potheadyard. b.Scope of supply shall be as per latest version of IEC . c.Gas monitoring system, pressure relief device, busbar, insulator, expansion joint/ flexible connection etc. as required. d. Barrier cones, mechanism box and other items as required. e. Any other item required to complete the system in all respects but not limited to above. Refer Section-2 and SLD for Details.	Nos.	6										
A.15	SUPPLY- GIS : 400KV, DOUBLE MAIN BUS SCHEME - LOCAL CONTROL CUBICLES (LCC)	Local Control Cabinet (LCC) for each bay shall be supplied. LCCs shall be separate freestanding floor mounted type for at least the following but not limited to - (1) 4 nos of fully equipped GT Bay Modules (2) 2 nos of fully equipped Line Bay Modules (3) 2 nos of fully equipped Line Reactor Bays Module (4) 1 nos of fully equipped Bus Reactor Bay Module (5) 1 nos of fully equipped Bus Coupler (6) 2 Sets of Bus VT Bay Module (7) 2 Sets of Bus Surge Arrestor Bay Module (8) 2 Sets of Bus Extension Module (9) 4 Sets of Interfacing GIS Module Refer Section-2 and SLD for Details. Note : 1. Bidder shall meet the requirement of LCC for the complete GIS System in minimum 11 nos of LCC . 2. The Quantity of the LCC shall be finalised at the time of detailed engineering. 3. Bidder to quote for above requirement as per the requirement of their offered GIS. 4. Any increase in the number of LCC at detailed engineering shall be without any cost and delievery implication.	Nos	10										
A.16	SUPPLY- GIS : 400KV, CONTROLLED SWITCHING DEVICE (CSD) FOR GIS CB	Controlled Switching Device for ALL of the 400kV, 2500A, One nos. of 3-phase, SF6 insulated circuit breaker of the offered GIS. CSD shall be deployed for optimization of switching behavior of bidder supplied GIS Breaker. Refer Section-2 for Details.	Nos	4										

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A.17	SUPPLY- GIS : 400KV, 50KA FOR 1S, 2500A, SINGLE PHASE GAS INSULATED BUS DUCT	400kV, 2500A 50kA for 1 sec, SF6 gas insulated GIS Bus duct (GIB) shall be complete & comprising of following but not limited to :- a) Single phase (isolated) SF6 ducts along with all accessories to connect 400kV GIS with Oil to SF6 bushing of all Line Reactor . b) Single phase (isolated) SF6 ducts along with all accessories to connect 400kV GIS with Oil to SF6 bushing of Bus Reactor. c) Single phase (isolated) SF6 ducts along with all accessories to connect 400kV GIS with outdoor SF6 to 400kV Air Bushings of all line bays. d) Gas monitoring devices, barriers, pressure switches, etc. as required . The total tentative length shall be sum of single phase (isolated) SF6 bus duct (GIB) lengths to all Line Reactor, Bus Reactor and 400 kV SF6 to Air Bushing. However ,exact length shall be calculated and finalised during detailed engineering stage. Note : The measurement of the length of the GIS duct shall be done from the centreline of the GIS Building Wall to the outdoor pothead yard equipment listed in a), b) and c) above. Refer SLD and Section 2 for details.	Nos	10										
A.18	SUPPLY- GIS : 400KV, DOUBLE MAIN BUS SCHEME - SF6 GAS REQUIRED FOR PLACING GIS INTO SUCCESSFUL OPERATION	First filling of SF6 gas for the equipment supplied plus an additional quantity sufficient for conducting all the tests on equipment at site before placing it into successful operation. In addition 20% of the total quantity of SF6 gas shall also be supplied. SF6 gas shall be supplied in non-returnable cylinders . Refer Section 2 and SLD for details.	m	300										
A.19	SUPPLY- GIS : DOUBLE MAIN BUS SCHEME - STRUCTURE MATERIAL INCLUDING FOUNDATION BOLTS, EMBEDDED ITEMS, RAILS AND/ OR OTHER MATERIALS ETC.	Supply of structure work for installation of GIS including support structure for GIS bus ducts, SF6 to Oil bushing of GT / Recator, SF6 to 400kV XLPE cable termination, SF6 to Air Bushing for Lines. Supports, platforms, foundation bolts, embedded parts in floors etc., which are required for installation of GIS components as per the specification that comprises of but not limited to the following : a) Base Plate / Channel / Metallic / Structural Member for seating of GIS system b) Lattice / Pipe structure required for installation of GIS, GIB, SF6 to Air Bushing of Line/ SF6 to Oil bushing of GT & Recator / SF6 to 400kV XLPE cable termination c) Foundation bolt / Anchor Fastening bolts for GIS system. d) Equipment fixing hardware. e) Cable tray arrangement (mounted on structures of) GIS / GIB / SF6 to Air Bushing of Line/ SF6 to Oil bushing of GT & Recator / SF6 to 400kV XLPE cable termination. Supply of structure material/base frames, required for complete installation of GIS including support structure (foundation bolts/ embedded parts/chemical or mechanical anchors) in floor, platform & railing etc. shall be in bidder's scope. The civil works shall be done based on bidder's design & drawings. Refer Section 2 and SLD for details.	MT	11										
A.20	SUPPLY- GIS : 400KV, LADDER, WALKWAY, MOBILE PLATFORM ETC	Bidder to quote for the following 1. Ladder 2. Walkways 3. Mobile Platform Any reputed make , which shall be subject to approval by customer during detailed engineering as per of Section-2 of technical specification.	MT	45										
A.21	SUPPLY- GIS : 400KV, DOUBLE MAIN BUS SCHEME - EARTHING MATERIALS INCLUDING HIGH FREQUENCY EARTHING, IF APPLICABLE	Supply of Earthing Material (Except 40mm MS ROD ,75x12mm / 50x6 GI Flat) and Supervision of erection of all Earthing connection for GIS to Earth Mesh on Floor shall be in Bidder's scope. The quantity shall be estimated by the bidder, based on their design philosophy. Supply of only 40mm MS ROD & 75x12mm / 50x6 GI Flat and Erection of Earth mesh on floor shall be done by BHEL. Design philosophy shall be submitted along with the bid in line with section-2 of technical specification. If any special earthing like high frequency earthing are required then supply and supervision of erection of the same shall be in bidder's scope. Refer Section-2 and SLD for details.	MT	5										
A.22	SUPPLY- GIS : 400KV, DOUBLE MAIN BUS SCHEME - CONSUMABLES FOR GIS	Supply of All consumables including grouting material and chemicals for the chemical anchors bolts if applicable for the complete installation, testing, commissioning and placing into successful operation of the GIS equipment. Consumables required during erection, testing and commissioning for complete package. It shall be supplied after confirmation from BHEL. Refer Section-2 and SLD for details.	Lot	1										
A.23	SUPPLY- GIS : 400KV, CONTINUOUS ONLINE MONITORING AND DIAGNOSTIC SYSTEM INCLUDING REMOTE MONITORING AND SUPERVISION STATION	Continuous Online Monitoring system shall be complete in all respects and comprising of following but not limited to, Continuous on-line monitoring and diagnostic systems in all individual bays (including LCD display) to monitor partial discharge, internal arcing, gas density, gas pressure, leakage, moisture etc., operating parameters such as current, voltage, temperature etc. complete with sensors, control / processor units, wiring/cabling in all respects , also comprising of following but not limited to Gas Monitoring System as follows, (a) All gas compartments shall have their own independent gas supervision and alarm systems. There shall not be any interconnection between different gas compartments for the purpose of gas monitoring. (b) Individual temperature compensated gas pressure gauge(s)/ density device(s) shall be provided in each of the gas compartments which will monitor and indicate the state of gas density. The system shall be such that it can be installed separately/ integrated with SAS/SCADA (As applicable). Remote monitoring and supervision station shall be complete in all respects but not limited to following : Remote monitoring and supervision station having time synchronization facility for CSD , SF6 Gas Monitoring & Conitnuous Online Monitoring System to be placed in control room for system operator. Continuous Online Monitoring and Alarm System shall be as per section -2 of technical specification.	Lot	1										
A.24	SUPPLY- GIS : ANY OTHER ITEM REQUIRED FOR COMPLETION OF PROJECT AND NOT COVERED IN SUPPLY ITEMS	Any other supply item required for completion of GIS work and not covered above shall be covered in bidder's scope.	Set	1										
B	Supply Item: Maintenance Supply Items . Refer Technical Spec for details													

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								Note: Bidder to quote % of GST for services (item no: G,H,J)		NOT APPLICABLE FOR SERVICE CHARGES				
B.1	SUPPLY- GIS : SF6 GAS PROCESSING UNIT	Gas processing units suitable for evacuating, liquefying, filling, drying, vacuuming and purifying SF6 gas during initial installation, subsequent maintenance and future extension of the GIS. Processing unit shall have facility of handling all said functions for at least 3 different compartments simultaneously. Both processing units complete with all valves, couplings, fittings etc. shall include the following: a. 20 no. hose pipe i 20m b. 10no. hose pipe i 10m c. 5no. hose pipe i 5m Four way coupling / manifold i 10 sets Straight coupling i 12 sets Required fittings and accessories for above. SF6 Gas Processing Unit shall be as per section -2 of technical specification.	Nos	2										
B.2	SUPPLY- GIS : VACUUMING MACHINE	Vacuuming machines suitable for vacuuming GIS compartments with latest technical requirements. Processing unit shall have facility of handling all said functions for at least 3 different compartments simultaneously. SF6 Gas Vacuuming machine shall be as per section -2 of technical specification.	Nos	2										
C	Supply Item: Mandatory SPARES . Technical Spec to be referred for details.													
C.1	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, SF6 TO AIR BUSHING	SF6 / Air outdoor bushings, complete with gaskets and connectors.	Nos	2										
C.2	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, CIRCUIT BREAKER - COMPLETE CIRCUIT BREAKER POLE OF EACH TYPE & RATING	Single phase 400 kV 2500A circuit breaker complete with all necessary apparatus.	Nos	3										
C.3	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, CIRCUIT BREAKER - CIRCUIT BREAKER INTERRUPTING HEADS	400 kV 2500A circuit breaker interrupting heads, complete with all necessary apparatus.	Nos	1										
C.4	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, CIRCUIT BREAKER - CIRCUIT BREAKER OPERATING MECHANISM	400 kV, 2500 A circuit breaker operating mechanisms, complete with motor & all necessary connecting apparatus.	Nos	1										
C.5	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, DISCONNECTOR SWITCH (3 PHASE)	3 phase 400 kV, 2500A isolator switch.	Nos	1										
C.6	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, DISCONNECTOR SWITCH (3 PHASE)-OPERATING MECHANISM	3 phase 400 kV, 2500A isolator switch operating mechanism complete with necessary apparatus.	Nos	1										
C.7	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, DISCONNECTOR SWITCH - INTERNAL PARTS	400 kV, 2500A isolator switch internal parts, complete with all necessary gaskets, mounting hardware etc.	Set	1										
C.8	SPARES- GIS : 400KV, 50KA FOR 1S, SAFETY GROUNDING SWITCH (3 PHASE)	3 phase 400 kV, 2500A safety grounding switch complete with all necessary gaskets, mounting hardware etc.	Set	1										
C.9	SPARES- GIS : 400KV, 50KA FOR 1S, HIGH SPEED GROUNDING SWITCH (3 PHASE)	3 phase 400 kV, 2500/500/200 A high speed grounding switch complete with all necessary gaskets, mounting hardware etc.	Set	1										
C.10	SPARES- GIS : 400KV, 50KA FOR 1S, VT CORE	400 kV /ã3 / 110 V / ã3 / 110 V /ã3 /110/ ã3 V VT core,	Nos	1										
C.11	SPARES- GIS : 400KV, 50KA FOR 1S, CT CORE	400 kV current transformer cores, set to comprise one core of each ratio, burden and accuracy used in the equipment.	Set	1										
C.12	SPARES- GIS : 400KV, 50KA FOR 1S, SURGE ARRESTOR INCLUDING SURGE COUNTER FOR GIS BUS	336 kV, single phase, station class gas insulated gapless surge arrestors.	Nos	2										
C.13	SPARES- GIS : GAS MONITORING DEVICE	Gas monitoring devices complete with all necessary fittings,gaskets & switches.	Nos	3										
C.14	SPARES- GIS : CONTROL SWITCHES	Control switches/control relays comprising one switch / relay of each type and rating used in the control cubicles.	Set	1										
C.15	SPARES- GIS : LOW VOLTAGE CIRCUIT BREAKERS	Low voltage circuit breakers, comprising one circuit breaker of each type and rating used in the control equipment.	Set	1										
C.16	SPARES- GIS : FUSES	Control circuit fuses, each set to comprise one of each type and rating of control circuit fuse used on the equipment.	Sets	10										
C.17	SPARES- GIS : LED	LEDs, each set to comprise one of each type and rating used on the equipment.	Sets	10										
C.18	SPARES- GIS : INSPECTION WINDOWS	Inspection windows.	Sets	3										
C.19	SPARES- GIS : SHEER PINS	Sheer pins.	Nos	100										
C.20	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, CIRCUIT BREAKER - CLOSING COILS	400 kV circuit breaker closing coils.	Sets	100										
C.21	SPARES- GIS : 400KV, 50KA FOR 1S, 2500A, CIRCUIT BREAKER - TRIP COILS	400 kV circuit breaker trip coils.	Nos	200										
C.22	SPARES- GIS : SPARE PARTS FOR SF6 GAS PROCESSING UNIT	Spare parts for SF6 gas processing unit.	Set	1										
C.23	SPARES- GIS : 400KV, LCC - SPARE CARDS,CONTACTORS AND AUXILLARY RELAY	Cards, contactors and auxiliary relays of each type in local control cubicles. 20% of the installed capacity	Lot	1										
C.24	SPARES- GIS : 400KV, SPARE AUXILIARY CONTACTS FOR DISCONNECTING SWITCHES AND GROUNDING SWITCHES.	Spare auxiliary contacts for isolator switches and grounding switches.	Set	1										
C.25	SPARES- GIS : 400KV, 50KA FOR 1S, HIGH SPEED GROUNDING SWITCH - INTERNAL PARTS COMPLETE WITH ALL NECESSARY GASKETS, MOUNTING HARDWARE ETC.	400 kV high speed fault making switch internal parts complete with all necessary gaskets, mounting hardware etc.	Set	1										
C.26	SPARES- GIS : 400KV, 50KA FOR 1S, HIGH SPEED GROUNDING SWITCH INTERNAL OPERATING MECHANISM COMPLETE WITH ALL NECESSARY CONNECTING EQUIPMENT.	400 kV high speed fault making grounding switch internal operating mechanism complete with all necessary connecting equipment.	Set	1										
D	Supply Item: General Purpose Tools and Tackles (Schedule V(D)). Refer Technical Spec for details													
D.A	Specific tools for operating the GIS. Refer Technical Spec for details													
D.1	SUPPLY- GIS : SPRING CHARGING HAND CRANK FOR CB MECHANISM	Spring charging hand crank for CB mechanism	No	1										

PRICE BID SCHEDULE

BHEL ENQUIRY NO:
PROJECT: SAPDC/SJVN ARUN-III PROJECT
ITEM: 400KV GIS & ASSOCIATED EQUIPMENTS

Sr. NO	Description	Detailed Description	Unit	Qty	HSN / SAC Code	Unit Ex-works /prices	Total Ex-Works/ prices	% of GST on Ex-works (vendor to mention % of GST applicable in respect of each line item)	GST on total Ex-works prices	Unit Freight & Insurance	Total Freight & Insurance	% of GST on F&I (vendor to mention % of GST applicable in respect of each line item)	GST on Total Freight & Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8 = 5 X 7	9	10	11	12 = 5 X 11	13	14	15 = 8 + 10 + 12 +14
								Note: Bidder to quote % of GST for services (item no: G,H,J)		NOT APPLICABLE FOR SERVICE CHARGES				
D.2	SUPPLY- GIS : HAND CRANK OF SUITABLE LENGTH	Hand crank of suitable length	No	1										
D.3	SUPPLY- GIS : HAND CRANK FOR MECHANISM OF DISCONNECTOR ,EARTH SWITCH, HIGH SPEED EARTH SWITCH	Hand crank for mechanism of Isolator, earth switch, high speed earth switch	No	1										
D.4	SUPPLY- GIS : DIGITAL MANOMETER	Digital manometer Make DILO or equivalent	No	1										
D.5	SUPPLY- GIS : TEMPERATURE METERING SET	Temperature metering set of make Manutan or equivalent	No	1										
D.6	SUPPLY- GIS : RELIEF VALVE MANOMETER	Relief valve manometer with coupling elements	No	1										
D.7	SUPPLY- GIS : FILLING HANDLE FOR SF6 GAS PROCESSING MACHINE	Filling handle , DILO or equivalent	No	1										
D.8	SUPPLY- GIS : GAS SERVICE CART	Gas service cart of make DILO or equivalent	No	1										
D.9	SUPPLY- GIS : TOOLS FOR SERVICE MODULE TIGHETNING	Tools for service module tightetning	Set	1										
D.B	Measuring and analysing tools for GIS erection and commissioning													
D.10	SUPPLY- GIS : SF6 GAS LEAKAGE DETECTOR	SF6 gas leakage detector of Make Dilo or equivalent	No	1										
D.11	SUPPLY- GIS : MULTIMETER DIGITAL	Multimeter digital of make FLUKE or equivalent	No	1										
D.12	SUPPLY- GIS : SF6 GAS VOLUME PERCENTAGE MEASURING DEVICE	Sf6 gas volume percentage measuring device of make DILO or equivalent	No	1										
D.13	SUPPLY- GIS : SF6 GAS DECOMPOSITION PRODUCT	SF6 Gas decomposition product of make DILO or equivalent	No	1										
D.14	SUPPLY- GIS : INSULATION TESTER DEVICE	Insulation tester device of Make Meggar or equivalent	No	1										
D.15	SUPPLY- GIS : AMMETER	Ammeter of Make Fluke or equivalent	No	1										
E	Supply Item: Tools & Instruments for Testing & Commissioning (Schedule V(A)). Refer Section-2 for Details.													
E.1	SUPPLY- GIS : DEW POINT METER	Dew point measuring device with all necessary auxiliaries, accessories and consumables, Dilo/equivalent make.	No	1										
E.2	SUPPLY- GIS : CONTACT RESISTANCE METERING DEVICE	contact resistance metering device with all necessary auxiliaries, accessories and consumables, Scope / equivalent make.	No	1										
E.3	SUPPLY- GIS : CB TIMING MEASURING DEVICE	CB time measuring device with all necessary auxiliaries, accessories and consumables, Scope / equivalent make.	No	1										
E.4	SUPPLY- GIS : OSCILLOSCOPE	Oscilloscope of make with all necessary auxiliaries, accessories and consumables, Fluke / equivalent make.	No	1										
E.5	SUPPLY- GIS : ENDOSCOPE	Endoscope with all necessary auxiliaries, accessories and consumables, S.T. Com / Equivalent make.	No	1										
E.6	SUPPLY- GIS : CIRCUIT BREAKER ANALYSER KIT	Circuit Breaker analyser suitable upto 400kV rating including HT,LT as well as 15.75kV with all necessary auxiliaries, accessories and consumables, SCOPE T&M / ISA /Megger /Programma or equivalent.	No	1										
E.7	SUPPLY- GIS : HEAVY INDUSTRIAL VACUUM CLEANER	Heavy industrial vacuum cleaner with all necessary auxiliaries, accessories and consumables. Eureka Forbes or equivalent make	No	1										
F	SUPPLY- GIS : TOOLS FOR ANNUAL MAINTENANCE OF GIS	Tools for Annual Maintenance (Operation, Maintenance & Handling) of GIS shall be supplied by the contractor. Details of tools to be finalized during detailed engineering in consultation with the supplier.	Set	2										
I	Supply: Reference unit prices of Individual Item/ Equipment for any addition or deletion	Unit Prices of Individual Equipment included here or in mandatory spares 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 (Bay, Busbar etc). Quoting for unit prices is mandatory and shall be considered for evaluation.												
I.1	400kV , 2500A Disconnector	1 Set= 1 No of each rating and type with all three poles with enclosure & without operating mechanism	Set	1										
I.2	400kV , 2500A Safety Earthing Switch	1 Set= 1 No of each rating and type with all three poles with enclosure & without operating mechanism	Set	1										
I.3	400kV , 2500A High Speed make proof Earthing Switch	1 Set= 1 No of each rating and type with all three poles with enclosure & without operating mechanism	Set	1										
I.4	Surge Arrestor including Surge Counter (Rated arrester voltage I 336 kV)	1 Set= 1 No of each rating and type with enclosure. Rated voltage may be changed after insulation coordination study.	Set	1										
I.5	400kV Current Transformer	1 Set= 1 No of each rating and type with enclosure	Set	1										
I.6	400kV Voltage Transformer	1 Set= 1 No of each rating and type with enclosure	Set	1										
I.7	Operating Mechanism for Circuit Breaker	1 Set= 1 No of each rating and type	Set	1										
I.8	Operating Mechanism box for Disconnector	1 Set= 1 No of each rating and type	Set	1										
I.9	Operating Mechanism for Safety Earthing Switch	1 Set= 1 No of each rating and type	Set	1										
I.10	Operating Mechanism for High Speed make proof Earthing Switch	1 Set= 1 No of each rating and type	Set	1										
I.11	Single Phase 400kV Bus Bar	Single Phase 400kV Bus Bar	mtr	1										
I.12	GIS Mettalic Enclosure (Any Type)	400kV GIS Mettalic Enclosure (Any Type)	mtr	1										
I.13	Conductor for Single phase Bus bar/ bus duct (any type)	Conductor for Single phase Bus bar/ bus duct (any type)	mtr	1										
I.14	Gas Permeable/ Communication type Insulator	Gas Permeable/ Communication type Insulator	Set	1										
I.15	Gas non -Permeable/non - Communication type Insulator	Gas non -Permeable/non - Communication type Insulator	Set	1										
I.16	Supply of Gas monitoring system devices	1 set =1 no of each type	Set	1										
I.17	PD sensor(UHF type)	Supply of PD sensor(UHF type)	No.	1										
I.18	Optical indicator for CB, Isolator, if applicable	Supply of Optical indicator for CB, Isolator, if applicable	No.	1										

PRICE BID SCHEDULE

BHEL ENQUIRY NO:
PROJECT: SAPDC/SJVN ARUN-III PROJECT
ITEM: 400KV GIS & ASSOCIATED EQUIPMENTS

Sr. NO	Description	Detailed Description	Unit	Qty	HSN / SAC Code	Unit Ex-works /prices	Total Ex-Works/ prices	% of GST on Ex-works (vendor to mention % of GST applicable in respect of each line item)	GST on total Ex-works prices	Unit Freight & Insurance	Total Freight & Insurance	% of GST on F&I (vendor to mention % of GST applicable in respect of each line item)	GST on Total Freight & Insurance	TOTAL (FOR Destination) PRICE (Rs.)
1	2	3	4	5	6	7	8 = 5 X 7	9	10	11	12 = 5 X 11	13	14	15 = 8 + 10 + 12 +14
								Note: Bidder to quote % of GST for services (item no: G,H,J)		NOT APPLICABLE FOR SERVICE CHARGES				
I.19	Telescopic enclosure , if applicable	Supply of Telescopic enclosure , if applicable	No.	1										
I.20	Sleeve enclosure , if applicable	Supply of Sleeve enclosure , if applicable	No.	1										
I.21	Cross tank , if applicable	Supply of Cross tank , if applicable	No.	1										
I.22	Density Monitor Switch	Supply of Density Monitor Switch	No	1										
I.23	Elbows	Supply of Elbows	No	1										
I.24	Expansion joints/ Flexible connections/bellows	Supply of Expansion joints/ Flexible connections/bellows	No	1										
I.25	400kV Bus Bar Modules : Lateral mounting units	Lateral mounting units: These shall be inserted, as required, between sections of bus bars, CGI bus duct connections, on transformer and CGI ducts termination. Refer Section-2 for Details.	Set	2										
I.26	400kV Bus bar Modules : Axial compensators	Axial compensators: These shall be provided to accommodate changes in length of bus bars due to temperature variations.	Set	1										
I.27	400kV Bus bar Modules: Parallel compensators	Parallel compensators: These shall be provided to accommodate large linear expansions and angle tolerances.	Set	1										
I.28	400kV Bus bar Modules: Tolerance Compensators	Tolerance Compensators: These shall be provided for taking up manufacturing and assembly tolerances.	Set	1										
I.29	400kV Bus bar Modules: Vibration compensators	Vibration compensators: These bellow compensators shall be provided for absorbing vibrations caused by transformers when connected to SF6 switchgear by Oil/SF6 bushings.	Set	1										
				968										
G	Services: Supervision of Erection of Testing & Commissioning													
G.1	SERVICES- GIS : 400KV, SITE VISIT FOR SUPERVISION OF UNLOADING & VERIFICATION OF MATERIALS FOR PROPER STORAGE & UP-KEEPING AT SITE	This includes following activities but not limited to, (a) Supervision of safe unloading of GIS & its accessories at site. (b) Reconciliation, storage & upkeeping of materials, with due instructions/ training to site persons for long storage.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.2	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS INCLUDING EARTHING	Supervision of Erection & Earthing of Complete GIS as supplied under including busbar(including bus bar bellows /compensators) , GT bays,Line Reactor Bays,Bus Reactor Bay, Line bays, bus coupler bay, bus PT bay , Bus Surge Arrester Bay, Bus Extension, etc.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.3	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- FOR GAS INSULATED BUS DUCT	Total tentative length is sum of single phase (isolated) SF6 duct lengths of all 12 nos. GT ,2 nos line reactors and 1 no bus reactor . Exact length shall be calculated by the bidder during detailed engineering stage.	m	300						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.4	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- SF6 TO OIL TERMINATION MODULE (TYPE A)	Supervision of Erection of SF6 to Oil bushing on Generator transformer (Oil /SF6) . 1 Lot is supervision work for 1 nos single phase SF6 to Oil bushing on Generator transformer (Oil /SF6) module.	Lot	12						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.5	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- SF6 TO OIL TERMINATION MODULE (TYPE B)	Supervision of Erection of SF6 to Oil bushing on Line/Bus Reactors (Oil /SF6) . 1 Lot is supervision work for 1 nos single phase SF6 to Oil bushing on Line/Bus Reactor (Oil /SF6) module.	Lot	9						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.6	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- SF6 TO EHV CABLE TERMINATION MODULE	Supervision of Erection of SF6 to 400kV EHV Cable Termination Module . 1 Lot is supervision work for 1 nos single phase SF6 to 400kV EHV Cable Termination Module	Lot	24						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.7	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- FOR SF6 TO AIR BUSHING	Supervision of Erection of SF6 to Air Bushing in Potheadyard. 1 Lot is supervision work for 1 nos single phase SF6 to Air bushing in Potheadyard.	Lot	6						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.8	SERVICES- GIS : 400KV, SUPERVISION OF ERECTION OF GIS- INTERFACING GIS MODULE	Supervision of Erection of Interfacing GIS Module between the SF6 to 400kV XLPE Termination and SF6 to Oil Termination Module on GT in GT Cavern Area 1 Lot is supervision work for 3 nos single phase Interfacing GIS Module.	Lot	4						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.9	SERVICES- GIS : 400KV, TESTING & COMMISSIONING OF GIS	TESTING & COMMISSIONING OF Complete GIS as supplied including busbar(including bus bar compensators),BUS DUCT , GT bays,Line Reactor Bays,Bus Reactor Bay, Line bays, bus coupler bay, bus PT bay , Bus Surge Arrester Bay, Bus Extension etc. at site acceptance testing for GIS as per customer approved SAT procedure shall be in bidder's scope.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.10	SERVICES- GIS : 400KV, TESTING & COMMISSIONING OF GIS- FOR SF6 TO EHV CABLE TERMINATION MODULE	TESTING & COMMISSIONING OF GIS- FOR SF6 TO 400kV EHV CABLE TERMINATION MODULE . 1 Lot is testing and commissioning work for 1 nos single phase SF6 to 400kV EHV Cable Termination Module	Lot	24						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.11	SERVICES- GIS : TESTING AND COMMISSIONING OF GIS- SF6 TO OIL BUSHING/TERMINATION MODULE (TYPE A)	TESTING AND COMMISSIONING OF GIS- SF6 TO OIL BUSHING/TERMINATION MODULE on GT (Oil /SF6) . 1 Lot is testing and commissioning work for 1 nos single phase SF6 to Oil bushing on Generator transformer (Oil /SF6) module.	Lot	12						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.12	SERVICES- GIS : TESTING AND COMMISSIONING OF GIS- SF6 TO OIL BUSHING/TERMINATION MODULE (TYPE B)	TESTING AND COMMISSIONING OF GIS- SF6 TO OIL BUSHING/TERMINATION MODULE on Line/Bus Reactor (Oil/SF6) 1 Lot is testing and commissioning work for 1 nos single phase SF6 to Oil bushing on Line/Bus Reactor (Oil /SF6) module.	Lot	9						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.13	SERVICES- GIS : TESTING & COMMISSIONING OF GIS- FOR SF6 TO AIR BUSHING	TESTING & COMMISSIONING OF GIS- FOR SF6 TO AIR BUSHING in Potheadyard. 1 Lot is testing and commissioning work for 1 nos single phase SF6 to Air bushing in Potheadyard.	Lot	6						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.14	SERVICES- GIS : TESTING AND COMMISSIONING OF GIS- INTERFACING GIS MODULE	TESTING AND COMMISSIONING OF GIS- INTERFACING GIS MODULE 1 Lot is testing and commissioning work for 3 nos single phase Interfacing Module in GT Cavern Area	Lot	4						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.15	SERVICES- GIS : 400KV, FINAL SUCCESSFUL HV/ POWER FREQUENCY TESTING OF GIS INCLUDING ARRANGING OF HV TEST KIT ALONG WITH OPERATOR	HV Test kit along with operator shall be arranged by the bidder on returnable basis. (GTs, Reactors, bus coupler & Line bays may be commissioned separately). Final testing as per IEC for complete GIS shall be done by the bidder.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.16	SERVICES- GIS : 400KV, INSULATION CO-ORDINATION STUDIES FOR GIS SYSTEM	As per section -2 of Tech. Specification.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
G.17	SERVICES- GIS : 400KV, FINAL DOCUMENTATION	This includes As-Built Drawings, Schematics, Relay Parameters etc. These documents shall be submitted by the bidder.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	
H	Services: Training													
H.1	SERVICES- GIS : 400KV, TRAINING FOR GIS AT MANUFACTURER'S WORKS	Training of Engineers nominated by the BHEL/SAPDC/SJVN (6 Nos. SAPDC/SJVN & 2 Nos of BHEL Engineers)during erection, testing and commissioning, and for operation and maintenance. To and fro travelling charges , lodging and boarding charges of Trainees shall be in BHEL/SAPDC/SJVN scope. (1 LOT = 8 Persons * 4Week) Lodging / Boarding, To & FroTravelling Charges of the Trainer, Training Material & Any other charges shall be borne by the bidder.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	

PRICE BID SCHEDULE

BHEL ENQUIRY NO:
PROJECT: SAPDC/SJVN ARUN-III PROJECT
ITEM: 400KV GIS & ASSOCIATED EQUIPMENTS

Sr. NO	Description	Detailed Description	Unit	Qty	HSN / SAC Code	Unit Ex-works /prices	Total Ex-Works/ prices	% of GST on Ex-works (vendor to mention % of GST applicable in respect of each line item)	GST on total Ex-works prices	Unit Freight & Insurance	Total Freight & Insurance	% of GST on F&I (vendor to mention % of GST applicable in respect of each line item)	GST on Total Freight & Insurance	TOTAL (FOR Destination) PRICE (Rs.)	
1	2	3	4	5	6	7	8 = 5 X 7	9	10	11	12 = 5 X 11	13	14	15 = 8 + 10 + 12 +14	
								Note: Bidder to quote % of GST for services (item no: G,H,J)		NOT APPLICABLE FOR SERVICE CHARGES					
H.2	SERVICES- GIS : 400KV, TRAINING FOR GIS AT SITE	Training of Engineers nominated by the BHEL/SAPDC/SJVN (6 Nos. SAPDC/SJVN & 2 Nos of BHEL Engineers)during erection, testing and commissioning, and for operation and maintenance. To and fro travelling charges , lodging and boarding charges of engineers shall be in BHEL/SAPDC/SJVN scope. (1 LOT = 8 Persons * 1 Week) Lodging / Boarding, To & FroTravelling Charges of the Trainer, Training Material & Any other charges shall be borne by the bidder.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE		
J	Service: Reference unit prices of Individual Item/ Equipment for any addition or deletion due to change in SLD, damage or replacement etc.														
J.1	Services of supervision for Erection of GIS	Services of supervision for Erection of GIS	Manday	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE		
J.2	Services of Testing & Commissioning of GIS	Services of Testing & Commissioning of GIS	Manday	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE		
J.3	Hiring charges of HV test kit with operator	Additional HV test kit charges including charges of operator, HV test kit, accessories & tools required for completion of HV test (Dielectric Test after installation of GIS). HV test kit charges include one or more bay at site.	Lot	1						NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE		
				421											
		TOTAL EX-WORKS PRICES (SUPPLY + SERVICES) =													
		TOTAL GST VALUE ON TOTAL EX-WORKS PRICES (SUPPLY + SERVICES) =													
		TOTAL FREIGHT & INSURANCE CHARGES =													
		TOTAL GST VALUE ON FREIGHT & INSURANCE CHARGES =													
		TOTAL FOR DESTINATION PRICES INCLUDING GST VALUE (SUPPLY + SERVICES) =													0
		[EVALUATION WILL BE DONE ON TOTAL FOR DESTINATION PRICES EXCLUDING GST VALUE]													0

NOTE:
1. Bidder has to mention "quoted" (in each applicable cell) in unpriced bid. In case that cell is Not Applicable, "NA" must be mentioned in that particular cell. Prices shall be mentioned in Price bid schedule only.
2. Bidder strictly to quote as per BHEL format only. Other format of price bid will be liable for rejection.
3. Bidder to quote strictly as per BoQ. Rates/prices shall not be combined. In case, the charges/prices are combined, BHEL reserves the right to reject the offer. Decision of BHEL shall be final.
4. It is certified that, We (M/s _____) have quoted as per the specified price format of the tender, otherwise our offer shall be liable for rejection.

NAME AND SEAL OF TENDERER