

Pre-Bid Clarifications on the 66 KV GIS Sub-Station

Sr. No.	Tender Clause	Pg./Cl. No.	Description as per Tender	Query raised	Clarification of DPA
1	Pre-Qualifying Criteria: Similar Work Definition	8	Similar works means: Similar works means having experience in "Supply, Installation, Testing and Commissioning of 66 KV or above GIS system with associated Sub-Station (Electrical installations at GIS Sub-Station includes 66 KV or above Circuit Breaker Bays and Bus Bars) at Port Sectors/Central Govt./ State Govt./PSU/ other reputed organizations within India."	We request you to consider 33 KV or above GIS system with associated Sub-Station.	Please refer Sr. No. 1 of Tender condition holder good Addendum.
2	Joint Venture Clause No. 3	8	The similar works reckoned are those executed by the tenderer as prime contractor or proportionately as member of joint venture or as a sub- contractor, authorized and approved by the Employer of the work(s) against which the tenderer has claimed his experience. If the similar work is executed as sub-contractor, it is mandatory to upload the sub-contract permission letter obtained from the Govt./Public Sector officer in case work belongs to the Govt./Public Sector, or from the owner of the project in case work belongs to private organization. Also, the completion certificate/form 3A authenticated by concern Govt./Public Sector officer or owner of the project shall be uploaded along with TDS certificate deducted for that particular work issued by the competent authority shall be submitted along with bid submission.	We request you to amend the clause, we have competed similar work from IOCL, we will not get sub-contractor authorized and approved letter from Clint. We re request you to Amend the clause we can submit payment proof and tax deducted at source (TDS) certificate Form 26 AS.	Tender condition holds good.
3	Payment Terms	34		Since the project Cost is at 48.95 Cr., we request you to consider 10 % Mobilization advance.	Tender condition holds good.
4	Third Party Inspection Clause No. 46-I	44	I, The Third Party Inspection Agency shall be arranged by DPA and cost of Third Party Inspection mentioned below shall be borne by DPA.	If Third Party inspection Agency Appointed it will be who's scope.	The Third Party Inspection Agency will be in the scope of DPA.

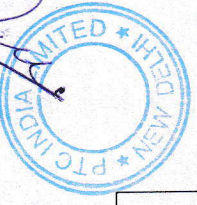
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5	EMD Clause No. 2	4	In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under The Ministry of Micro, Small and Medium Enterprises indicating the list of activity related to the subject tender as per National Industrial Classification - 2008 mentioned in the table below only shall become eligible for exemption from payment of Tender fee/EMD. Such bidder shall upload the scanned copy of valid certificate along with Bid Securing Declaration Form (Form - 6 in Section - IV) in preliminary bid.	In case of Joint ventures if any one partner has the Micro and Small Enterprise (MSEs) valid certificate please clarify EMD is exempted? If not, we request you consider the same.	In case of JV, the valid & relevant MSME certificate of the Lead Partner is eligible to get exemption.
6	Last Date & Time for Receipt of Bids	11		Since all OEM components is involved in the tender, we request you to postpone the Bid Submission date by 15 Day More	Bidders may check on the DPA website. <i>h-procurement portal</i>
7				What is the soil filling area and height at new 66 KV Substation area.	Quarry spall & G.S.B. Filling
8				Distance between existing substation and new 66 KV Substation as existing power transformers (12.5 MVA & 10MVA), 66 KV Las, CTs, PTs, Isolators are to be shifted to new 66 KV Substation). (Point No. 2)	The approx. distance is 1200 Mtr. However, the bidder may visit the site to understand the distance.
9				What is the length of 66 KV Line IN Line Out (LLO) length. (Point No.6). Need confirmation from customer on scope of removal of existing transformer foundations and Oil soak pits is in bidders' scope or customer scope,	LLO is not applicable. Hence, Tender conditions holds good.



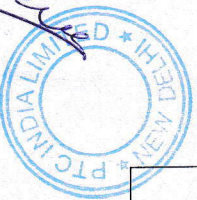
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10	66 KV Switchyard Civil Work Clause no. 13	177-178	New Substation 66 KV Gas Insulation Switchgear Civil Work with Material Supply and Working of all Foundations, Fabrication, Contraction, Beam/Row Column, Plaster, Fencing, Plumbing, Painting, RCC Road Work by Contractor as per direction of Engineer-In-charge	Need confirmation from customer on scope of removal of existing transformer foundations and Oil soak pits is in bidders' scope or customer scope,	It's in the contractor's scope.
11				No of Bays of existing 11 KV GIS Switchboard for making SCADA provision.	15 Ways.
12				The distance between old & new 66 KV Substation is 1100 Meters. We need to take details of route to lay 3 Runs of 3 C X 300 Sq. mm. Cables.	Bidder may visit the site to take details.
13				At Railway crossing Horizontal Directional Drilling (HDD) is to be done. Please take the length of end to end.	Bidder may visit the site to take details.
14				As per BOQ 3 KM FO cable is given. Take the details of FO cable route i.e. whether there is existing cable trench / pipe rack are available or this cable is to be buried.	FO cable is to be put in the conduit & to be laid inside the cable trench to be constructed by the contractor under his scope.
15				As per Specification, 1 No. 66 KV Transmission line Tower is to be erected. Need to ensure, this tower is coming in customer site or others site.	The tower will be outside the substation boundary



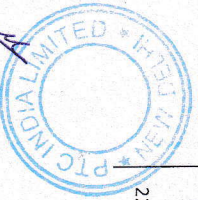
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16				As transmission Tower needs Pile foundations, please check pile foundations are required for Building / Transformer foundations.	The tower will be on Pile Foundation but for the Building/ Transformer foundation, Tender condition holds good.
17	Drawings, Data, Manuals & calculations Clause No. an.3	129	Drawings, Data, calculations and Manuals shall be submitted in triplicate with the bid and in quantities and procedures as specified in General Conditions on Contract and/or elsewhere in this specification for approval and subsequent distribution after the issue of Letter of Intent.	Request to provide SLD and site layout drawings.	Preparation of all drawings / documents as required shall be in bidder's scope.
18	Clause No. 4.7	203	Foundation of PS Type D/C Transmission Line Tower. It shall be on Pile Foundation as per GETCO Standards	As it is port area it required pile foundation. But is not mentioned in BOQ.	Tender condition holds good.
19				Whether it is buried cable trench or cable tray work.	RCC Cable trench with Cable trays
Sr. No.	Tender Clause	Pg./Cl. No.	Description as per Tender	Query raised	Clarification of DPA
20	Technical Specification 1	93	SF-6 gas insulated line bay module comprising of 3 Nos. of single phase gas insulated voltage transformer	Our complete GIS shall be three phase enclosed. Pls clarify	The GIS system shall be 3 phase enclosed with PTs
21	Technical Specification 1	93	The Bus Coupler in Double Bus Bar Bay will consist of 1 No. of bus coupler bay module and comprising of 3 Nos. of Isolator switches with earthing, 3 Nos. of single phase CT	CTs shall be 3phase encapsulated. Pls clarify.	The CTs shall be encapsulated
22	Technical Specification 1	93	The specification covers scope of design, engineering, fabrication, manufacturing, shop assembly, inspection and testing before supply, transportation, delivery at destination unloading & storage	Anchoring bolts are not applicable for Siemens make 145 KV GIS.	This shall be designed specific

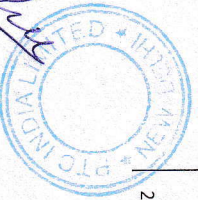


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			at site, site erection, site testing, commissioning and putting in to successful operation complete with all materials, support structures, anchoring bolts		
23	Modular design & future extension	94	Irrespective of bus bar design, provision is to be made available for isolation of individual bay without disturbing adjacent bay.	Request you to accept shutdown of 1 bus & adjacent bay in case of fault in individual bay. Pls. clarify	Tender condition holds good.
24	Modular design & future extension	95	Line & Bus disconnectors	Please note that our Busbar & Bus disconnectors are in the same gas compartment & Line Disconnecter and Cable termination module shall be in same gas compartment. This arrangement is accepted in GETCO already hence request you to accept the same.	This shall be designed specific
25	Modular design & future extension	95	The bus enclosure & GIS shall be sectionalized in a manner that maintenance work on any bus dis- connector can be carried out by isolating and evacuating affected bay & affected Dis connected bus bar only. In this condition, other bus bar & bays must be in energized condition.	Request you to accept shutdown of 1 bus & adjacent bay in case of fault in Bus Disconnecter	Tender condition holds good.
26	Maintenance and repair of Circuit Breaker and other equipment.	96	Manufacturer shall submit the study report of VFTO generated for GIS installation for all KV classes.	VFTO is applicable only for GIS above 375 KV. Hence, not applicable for this package.	The VFTO is not applicable.
27	Physical Arrangement	99	Walkways	Our Siemens make GIS is easily accessible, hence no walkway is required. However, we shall provide	Tender condition holds good.



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			additional A type ladder for accessibility. Requesting your Concurrence.	
28	Interlocks	104	Mechanical & electrical interlocks must be provided to ensure absolute and reliable protection against potentially harmful Mal-operation of the switchgear.	The GIS shall be with mechanical interlock
29	Gas insulated bus	106	Gas Insulated Bus	GIB is not applicable for this package.
30	Circuit Breaker	108	Controlled switching device	CSD is not applicable for 66 KV GIS.
31	Metal enclosed Surge arrestor.	123	Surge Arrestor with disconnecting link.	We offer Surge Arrestor with disconnecting link however to remove the link minimal gas work has to be done.
32	Insulated gas and gas leakage rate.	124	Leakage Rate	Leakage rate should be less than 0.1% per annum
33	Modular design and future extension.	94	local control cubicle.	Local control Cubicle shall be Bay mounted only.
34			Similar works means having experience in "Supply, Installation, Testing and Commissioning of 66 KV or above GIS system with associated Substation (Electrical installations at GIS Sub-Station includes 66 KV or above Circuit Breaker Bays and Bus Bars) at Port Sectors/ Central Govt./State Govt./PSU/ other reputed organizations within India.	We request you to kindly consider the Similar Work as : Similar works means having experience in "Design, Supply, Installation, Testing and Commissioning of one no. of 132 KV or above AIS/ 66KV or above GIS substation with construction of control room building. store, staff quarters and at-least 1 no. of 66 KV or above Hybrid GIS Transformer Bay module on both HV and LV Side in

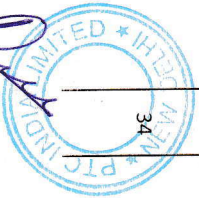
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Please refer Classification of DPA at Sr.No. 1 above



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			single substation, with minimum successful operational performance of One year of the Hybrid module, for which certificate issued by not below the rank of Superintending Engineer at Port Sectors/Central Govt./State Govt./PSU/ other reputed organizations within India.	
35	Special Conditions of contract	48	Terms of Payment	Tender condition holds good.
36	Make List of Electrical Items.	85	HV Gas Insulated Breakers / GIS	Tender condition holds good. Please refer S.No 4 of Addendum.
37	Make List of Electrical Items.	85	Power Transformers	Please refer S.No 4 of Addendum. Tender condition holds good.
38	Make List of Electrical Items.	85	HT XLPE Cables	Tender condition holds good.
39	Make List of Electrical Items.	85	LT XLPE Cables.	Tender condition holds good.
40	Make List of Electrical Items.	85	PROTECTION RELAYS	Tender condition holds good.



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41	Scope of Work and Technical Specification.	159	Technical Specification of item No. 3 Oil	instead of Natural Ester Vegetable Oil, due to its superior insulation quality and easy handling during maintenance.	Tender condition holds good.
42	Bill of Quantities.	201	Power/Distribution Transformer.	As you are aware that the present installation in your premises is in highly corrosive area, where in the equipment has been dilapidated due to weather condition. Dismantling and re-shifting it to new location, will not ensure its proper functioning. The condition of the equipment's will be determined only once it is shifted to new location. However, kindly ensure this re-instated equipment's performance will not be covered under our defect liability / Warrantee Period.	Performance warranty for the re-located / shifted equipments shall be out of the defect liability / warrantee period specified under the relevant clause of this tender.
43	65 KV Outdoor Equipment for Metering Yard	202		As you are aware that the present installation in your premises is in highly corrosive area, where in the equipment has been dilapidated due to weather condition. Dismantling and re-shifting it to new location, will not ensure its proper functioning-The condition of the equipment's will be determined only once it is shifted to new location. However, kindly ensure this re-instated equipment's	All the equipments have been recently commissioned. Also, the structures are new. So, all of them can be easily dismantled, shifted & re-erected/ re-installed in the proposed Sub-Station. However, if GETCO allows for indoor Metering, it



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				performance will not be covered under our defect liability / Warrantee Period. Further it is mentioned to re-use the support structures of the existing equipment's, which will not be possible as due to corrosive environment, most of the structures will not be dismantled properly due to rusting. Kindly make provision for installation of new structures at new S/S.	shall be done by the contractor under their scope. In that case, the structures with all equipments shall be removed, shifted to a location as will be directed by the EIC.
44	Civil Work : Pile Foundation			Since the Load bearing capacity of the soil at site very low, hence it will be required to do the Pile foundations. But Pile foundations are not considered in Civil BOQ of the tender. Request to suggest and clarify	Tender condition holds good
45	11 kV HT Switchboard			Kindly provide details of existing 11kV HT Switchboard regarding the IEC 61850 compatibility and SCADA interface compatibility with the new proposed system	Switchgear is of Siemens make & SCADA compatible
46	Single Line Diagram (SLD)			Kindly provide SLD (Single Line Diagram) of the existing Electrical Distribution system enabling us to quantify the work as per the Scope of work of the tender.	Clarification at Sr. No. 49 may be referred
Sr. No.	Tender Clause	Pg./Cl. No.	Description as per Tender	Query raised	Clarification of DPA
	Existing SCADA		Supply, Erection, Testing and Commissioning of SCADA equipment and materials as per respective Tech. Spec. No. 8 and suitable for Control & Monitoring of 66 KV GIS Switchgear Modules, 11 KV New GIS Switchboard, 11 KV Existing GIS Switchboard with Switches & OFC (02 lengths), Station Auxiliaries, etc. from SCADA over IEC :	Kindly provide the existing SCADA & Protection	No SCADA system exists. However, existing 11 KV Board is to be integrated with the



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47	Clause No. 6.1	205	61850 Communication protocol with UPS for SCADA with at least 1 Hr. back up, all required Hardware, Accessories, Communication Cables, Patch Cables, SCADA Furniture, etc. as per Tech. Spec. No. 8 and latest GETCO specifications & practice with minimum spec, but not limited to it.	details.	SCADA system to be supplied under the scope of this tender
48	Civil Work : Pile Foundation			Pile Foundation: Given the presence of marshy soil and SBC on the lower side, we recommend pile foundation. We request that you add the necessary quantity for pile foundation in the Civil BOQ.	Tender condition holds good.
49	Single Line Diagram (SLD)			Kindly Provide existing Single Line Diagram (SLD).	SLD is attached at Annexure - I
50	Technical Specification of Item No. 2	135	Horizontally insulated horizontal draw out.	Not applicable for GIS.	Clarification at Sr. NO. 96 may be referred
51	Technical Specification of Item No. 2	135	3 Nos. of CT 300/1+1+1+1+1 A (PS class/PS class/SP20/0.2/PS class) 20 VA burden CT with 0.2 accuracy, PS class for differential, PS class for REF, SP20 for over current and earth fault, SP20 protection class for metering, one no PS class asspare.	Please confirm requirement of 5th PS Class core. Please delete 5th PS Class Spare Core as not possible for such lower ratio CT. VA Burden will be as per sizing calculations.	The CTs shall be provided with 4 nos. of PS Class cores
52	Technical Specification of Item No. 2	135	1 No. 3 phase 11 KV/VN3 /110 V/VN3/110 V/VN3 draw out PT with burden and class 0.2/3P accuracy.	PTs for GIS Panels are metallized resin cast Plug-in type without any HT Fuse in the primary side. Kindly change the same for safety reasons.	Clarification at Sr. No. 96 may be referred
53	Switchgear Panel	137	Uniform width not exceeding 500 mm irrespective of feeder	2500 A rated Panels shall have more width than 500 mm. due to higher rating as per type tested designs.	Width as per valid Type Test Report



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			rating		Kindly accept the same as per type tested designs of OEM. For 1250 A panels, 500 mm. width is sufficient.	shall be provided.
54	Switchgear Panel	137	Rear wall with gas flow path and top explosion provision	It varies from OEM to OEM design. In our case, the ventout is from the rear of CB chamber but the arc goes to the top of switchboard. Request to delete this point.	Accepted, but the Gas exhaust shall not affect the Operational Staff.	
55	Switchgear Panel	138	During internal arc, the hot gases from circuit breaker or cable compartment should not affect or travel through the bus-bar compartment in any manner.	This is very specific to some OEM designs and the method of arc evacuation varies from OEM to OEM panel design. The path to channelize the plasma may be from busbar compartment to reduce the let-through energy. Hence, kindly delete this point.	Tender condition holds good.	
56	Operational Reliability	138	Long-time proven components like welded-in bushings, welded-in bellows and the Siemens vacuum switching technology are integrated in this innovative global concept.	This is OEM specific point. Request to kindly remove.	Noted but ensure that the operational reliability shall be proven without loss of SF-6 Gas.	
57	Circuit Breakers	139	Vertically mounted interrupters.	Every OEM has different orientation of Vacuum Interrupter and the same are type tested. Kindly allow for horizontally mounted interrupters.	Acceptable as per valid type tested design.	
58	Bus-bars and Insulators	142	The bus-bars are flat at ends, making it easy for extension in future for any switchgears.	Kindly accept tubular Busbars as per OEM type tested design. However, future extension provision shall be provided.	Bus bar can be as per the valid type tested design with provision for future extension.	
				Only CT Circuit shall be 2.5		



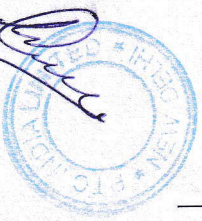
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59	Earthing and Earthing Devices	143	All metallic cases of relays, instruments and other panel mounted equipment shall be connected to earth by independent stranded copper wires of size not less than 2.5 Sq. mm.	sq. mm. VT Circuit and control circuit shall be 1.5 sq. mm. due to compact size of GIS panels which is sufficient to carry the LV loads. Size more than this, if forcefully provided, will result in hindering the closing of LV door due to heavy bunch of wiring. Citing this practical constraint and user friendliness, request to accept 1.5 Sq. mm. cable for VT and control circuit.	Tender condition holds good.
60	Capacitive Voltage Presence Indicator	143	Capacitive voltage detection is performed with an LRM socket module (LRM = low resistance modified). In this LRM socket module, fixed voltage indicators are mounted to verify safe isolation from supply phase by phase.	This is an old technology which is obsolete now, only CVD based VPIS is provided. Kindly remove.	State of the art technology with proven performance record are acceptable.
61	Instrument Transformers.	144	Access to Line VT shall be possible only after it is earthed thus providing operator's safety.	Considering Safety Aspect, request to clearly mention, if Two Position Disconnect switch is mandatory for Line VTs disconnection or not?	Two position with Earthing provision with switch is must.
62	Instrument Transformers.	144	All voltage transformers shall have suitable HRC current limiting fuses	HRC Fuses are not applicable for Metalized Resin cast PTs used for GIS Panels. Hence, request to remove.	HRC fuses are not applicable for GIS panel PTs
63	Instrument Transformers.	144	Bus voltage transformer shall be provided in a separate Bus PT panel.	As per OEM optimized design, request to kindly accept Bus VTs on top of any feeder. This will save space inside the Substation. Since VTs are touchproof type in GIS	The provision in GIS system shall be designed specific



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			Panels, there is no impact at all while mounting the VTs on top of any panel.	87T & 64R shall be the part of the CRP. However, CT cores shall be provided for the same.
64	Low-voltage compartment.	144	There shall be numerical protection relay(s) (50, 50 N, 51, 51 N, 95, 86) in each incomer.	
65	Numerical Protection Relays.	145	Relay shall have minimum 18 tricolor LEDs.	The numerical relay shall be with maximum of 11 nos. dual color LEDs
66	Numerical Protection Relays.	145	Minimum 3000 Nos. of event records shall be stored in Non-volatile memory and failure of control supply shall not result in deletion of any of these data.	Tender condition holds good.
67	Numerical Protection Relays.	145	Minimum total storage time for 20 Nos. of disturbance records shall be 200 Seconds.	Tender condition holds good.
68	Numerical Protection Relays.	145	Relay shall have minimum 22 Binary inputs to take care of status of all devices, trip circuit supervision inputs and Auxiliary fault alarms. Relay shall have minimum 10 Binary outputs.	BI/BO shall be adequate with atleast 10% spare after fulfilling the complete requirement of the protection, control & monitoring from SCADA for



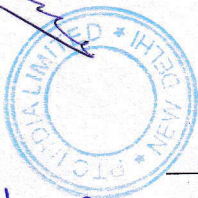
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					complete feeder.
69	Power Cable Termination.	147	Cable termination required will be conventional heat shrinkable type.	Cable Termination for GIS panels shall be Solid Silicone insulated Touchproof type only . Kindly change and accept the same. Heat Shrinkable terminations are for AIS Panels. If installed in GIS panels, it will result in flashover.	The cable termination kits for GIS shall be solid silicon insulated touch proof type
70	Type Tests.	148	The GIS offered should be fully type tested, in the type test reports the GIS manufacturing location should be same as the location from where complete GIS is offered and shall be supplied by the manufacturer for this project. Any local manufacturing or assembling of the SF-6 vessel or complete GIS panel in India and same not type tested from recognized labs shall not be acceptable.	For 2500A Panels, the tanks shall be brought from the parent and assembly shall be done at India Works of OEM. Request to accept the same ,else the OEM will be out of this bid.	Parent type tested design is acceptable. However, the complete panel shall have valid Type Test Report and shall be of the of same make as per Valid Type Test Report.
71	Technical Particulars for 11 KV GIS Numerical Relays.	154	Indication of Nos. in Master Trip Relay - 16 LEDs.	Not applicable.	For Master Trip relay indication is not applicable
72	Technical Particulars for 11 KV GIS Numerical Relays.	154	Make of high speed Master Trip relay - Function is part of 7SR220 Relay.	OEM Specific, kindly remove.	The high speed Master Trip relay shall be design specific of OEM.
73	Technical Particulars for 11 KV GIS Numerical Relays.	154	Number of N/O And N/C contacts provided for High speed Master Trip Relay - Above 22 BI & 12 BO.	16DI+10DO	BI/BO shall be adequate with atleast 10% spare after fulfilling the complete requirement of protection, control & monitoring from



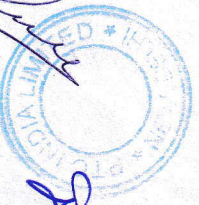
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					SCADA for complete feeder.
74	11 KV GIS TECHNICAL SPECIFICATION. Clause No. 04	154	Manufacturer's Design/type Ref - 11 KV GIS / 8DJH STE	OEM Specific requirement. ABB has a different model name.	The 11 KV GIS shall be design specific of the OEM.
75	11 KV GIS TECHNICAL SPECIFICATION. Clause No. 08	155	Rated current - 1250 A.	2500 A for Incoming, Bus-coupler and Busbar 1250 A for all outgoing. Kindly confirm.	The incoming and bus coupler of 11 KV GIS shall be of 2500 Amp ratings & outgoing shall be 1250 Amp
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76	SCOPE OF WORK AND TECHNICAL SPECIFICATION	90	This also envisages the construction of a new Substation Building, filling up the plot area identified for new 66 KV Substation.	As per scope and technical specification, Filling up the plot area identify for new 66KV substation, Please provide the level detail	Present R.L. (+) 8 to (+) 8.20 filling with Dust 0.75 mtr. With compound wall during execution of work.
77	Section-VII, BOQ Sr. No. A 4.4	203	Disconnection, Dismantling, Packing, Loading, Shifting, Unloading, Installation, Testing and Commissioning of 66 KV, Oil type Tariff Metering CT for Incoming 66 KV Lines, including Support Structures, Hardware and Accessories.	Section-VII, BOQ Sr no. A 4.4 Dismantling can be done but same tariff metering CT could not be used as per new demand, CT ratio will change.	Tender Conditions holds good.
78	Section-VII, BOQ Sr. No. A 5	204	Control and Protection Panels with Numerical Relay, Bay Control Unit all with latest state of art technology suitable for Control & Monitoring of GIS Switchgear Modules from SCADA over IEC : 61850 Communication Protocol as per Technical Specifications and latest GETCO specifications & practice.	Section-VII, BOQ Sr no. A.5 Please clarify the actual requirement	The C&R Panel will be used to control all incoming bays, Bus-coupler and Transformer units in 66kV voltage level. The C&R panel shall be SCADA compatible.



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79	11 KV Indoor GIS Switchboard	197	Supply, Installation, Testing and Commissioning of 11 KV, 2500 A, 26.3 KA for 3 Sec. Indoor type GIS Switchgear with Numerical Protection relays suitable for monitoring and controlling from SCADA over IEC : 61850 Protocol, in line with the tender SLD, with all required accessories, first fill SF-6 Gas, test plugs, Conforming to the Tech. Spec. No. 2. Offered GIS shall be supplied with all required accessories / modules to facilitate future expansion on both the sides.	Existing 11kv GIS Switchboard detail required for integration with SCADA & modification	The technical specification of the existing 11KV GIS breaker 15 Way.
80	Section-VII, BOQ Sr. No. A.6.2	205	Supply, Laying, Termination & Commissioning of 6-F, Double Sheath Armoured Outdoor, Single Mode Optic Fiber Cable fully compliant with IEC: 60794-3, with heavy duty HDPE duct.	Section-VII, BOQ Sr no. A.6.2, 6F Armoured FO cable should be Multimode	The revised BOQ shall be "Supply, Laying, Termination & Commissioning of 6-F, Double Sheath Armoured Outdoor, Multi Mode Optic Fiber Cable fully compliant with IEC: 60794-3, with heavy duty HDPE duct." <i>pendentive on tender SLD & layout on</i>
81				Please provide the Tender SLD	The tender SLD is attached as Annexure-A1 & A2
82	Section-VII, BOQ Sr. No. A.10	206	Supply, Installation, Testing and Commissioning of SCADA compatible 415 V, Main LT Distribution Board for Station Auxiliaries as per SLD and Tech. Spec. Incomer Feeder shall be fixed type 1000 A, ACB with LSIG Numerical Protection Relay suitable for controlling & monitoring from SCADA. Outgoing shall be MCB/MCCB as per required ratings with status monitoring Indicating Lamps on Panel.	Section-VII, BOQ Sr no. A.10, LT AC Distribution SLD required.	The contractor has to prepare the LT AC Distribution SLD as per new system.
83	Section-VII, BOQ Sr no. C, 22.4 (II)	219	Spares for 66 KV Control Relay and Protection Panels / SCADA: (II) Bay Control Unit of each make and model no.	Section-VII, BOQ Sr no. C, 22.4 (II), It should be Bay Control & Protection Unit.	The BCPU shall be applicable for 66 KV CRP panel/ SCADA

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84	Section-VI, Scope of Work Clause no. a11	124	GIS to Transformer/Reactor :- 1) For 66/11 kV Transformers (As specified in SLD / S/ECT DRG / BOQ): 66 KV side : by GIS SF-6 to air bushing to OIP condensers bushing of transformer by conductor. GIS SF-6 to air bushing shall be polymer type only.	As per technical specification, Clause a1.1 & 2, we have not envisaged that requirement of SF6 to air bushing & Bus duct, as from GIS to Power transformer & incoming line will come through UG cable. Pls. confirm	Tender Conditions hold good.
85	Section-VI, Scope of Work, Technical particulars of GIS Clause no. aq & clause no. ae.2	120 & 134	20. CT Ratio 300 -150/1-1 (during detail engineering) & Metering, OC, EF protection - 600 300/1	Ambiguity in CT ratio, aq. in technical particulars of GIS switchgear & ae.2 Rating & Diagram plate. Please confirm	The CT Ratio of both the cases, i.e. Feeder bay and Switch gear should be same i.e., 600-300/1-1
86	Section-VI, Scope of Work, Technical specification for item no.8	179	<u>Battery & Battery Charger</u> - Capacity will be 250 Amp-Hours - Maximum current output will be 25Amps trickle charge.	Battery charger ampere capacity required.	The technical specification of Battery and Battery Charger is given in tender, "Maximum current output will be 25Amps trickle charge"
87				SBC of the soil is very low @1.5 T/Sq.Mt so require Pile Foundation for GIS Building structure.	Tender condition holds good.
88			Project Single line diagram	Tender scope as per attached layout & SLD	Clause at Sr.No. 81 may be referred
89	Special Tools, Tackles and Equipment clause no. I(5) of Section-VI	103	Online PD monitoring system is specified in special tools of GIS CI I (5).	As per the GETCO Specification for GIS, Online PD monitoring system is applicable for 220KV and above voltage level only hence, the same is not applicable for the 66KV SS under current tender	The PD monitoring system is not applicable for 66 KV GIS S/s.

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90	Electrical Data clause no. q of Section-VI	107	The Ratings of 66KV GIS, 11KV GIS are As per Electrical data (q) GIS Bus-Bar rating shall be 2000A	The Ratings of 66KV GIS, 11KV GIS are ambiguous in various clauses of the tender specification and BOQ. As per Electrical data (q) GIS BB rating shall be 2000A however, at some other locations it is specified as 2500 Amps. We are considering Switchgear rating as below. DPT to confirm 66KV GIS: Bus Rating - 1600 Amps. 11KV GIS: Bus Rating - 2500 Amps.	For 66 KV it shall be 1600 Amp. For 11 KV Clarified at Sr. No. 75
91	Electrical Data clause no. q of Section-VI	108	The Ratings of 66KV GIS, 11KV GIS are As per Electrical data (q) GIS BB short circuit rating shall be 40KA for 3 Sec.	The Ratings of 66KV GIS, 11KV GIS are ambiguous in various clauses of the tender specification and BOQ. As per Electrical data (q) GIS BB short circuit rating shall be 40KA for 3 Sec however, at some other locations it is specified as 31.5KA for 3 Sec. We are considering Switchgear Short circuit rating as below. DPT to confirm 66KV GIS: Bus Rating - 31.5KA for 3 Sec 11KV GIS: Bus Rating - 26.1KA for 3 Sec	The 66 KV GIS Bus rating shall be 31.5 KA for 3 sec & that of 11 KV GIS shall be 26.3 KA for 3 sec
92	Principal Parameters clause no. (s) of Section-VI	111	The Ratings of Clause (s) "Principle parameters"	The Ratings of Clause (s) "Principle parameters" are ambiguous. Rated current and Short circuit rating of the 66KV GIS, 11KV GIS and LT Panel board are applicable as per the point no. 4 & 5 above. Hence, this clause shall not be applicable for the ratings.	Clarification at Sr. No. 90 & 91 may be referred

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93	Technical Requirement for controlled switching device as per clause no. (i) of Section-VI	113	In the specification (PDF Page 113), Control switching device:	In the specification (PDF Page 113), Control switching device is specified. It is to be noted that it is not applicable in general and it is used / applicable for selective 400KV and above system only. Controlled switching device are applicable for the systems $\geq 400KV$ Only. Hence, the same shall not be considered.	The control switching device is not applicable for 66 KV GIS system.
94	11. 66 KV Metering side Equipment for Item no. 4 :-	177	Installation of outdoor type 60 KV, 10 KA Lightning Surge Arrestor (1 Phase) complete in every way with outdoor junction boxes suitable, connectors, hardware, accessories, terminals for LV wiring complete in every way.	As per the GIS specification. LA are specified to be the part of GIS however, in the given situation, all LA's shall be outdoor type only. We are not considering LA as part of GIS. Instead these shall be Outside / Outdoor type only.	The LA shall be for outdoor application
95	Technical specification of item NO. 2		3 Nos. of CT 300/1+1+1+1+1A (PS Class/PS class/SP20/0.2/PS class) 20 VA burden CT with 0.2 accuracy, PS Class for differential PS class for REF SP20 for over current and earth fault, SP20 protection class for metering, one no PS class asspare,.	In 11 KV GIS CTs with 5 core are specified. However, it is not possible to accommodate 5C CT in GIS and same is in not required also.	Clarified at Sr. 51
96			Horizontally insulated horizontal draw outt	In 11 KV PT's are specified to be draw-out time. However, in GIS panel draw-out type PT's are not applicable.	The 11 KV PTs shall be plug-in type.
97	11 KV GIS TECHNICAL SPECIFICATION	142		As per the "Functional compartments" of 11KV GIS specification, PT's are required in all the feeders. However, PT's shall be required only in Incomer and Buses at the max. PT's to be provided in Incomer and Buses only. Necessary voltage for metering in all outgoing feeders shall be extended from the respective bus pt	The PT's shall be provided at the Incomer and Buses.



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98	Numerical Protection Relays	145	Specification for Numerical protection relays are ambiguous for following reasons: 1. The communication protocol specified at one location are DNP 3.0, Modbus - RTU, IEC-103 <u>OR</u> IEC-61850 protocol however, at other locations only IEC-61850 protocol is specified with redundant ports. 2. Numerical relays are specified to be PRP/ HSR compliant. This is un-warranted for 66KV SYSTEM and beyond the GETCO specification and normal utility standards.	1. IEC-61850 Communication protocol only shall be considered. 2. As per GETCO specification, Numerical protection relays are not to be compliant with PRP / HSR protocols. Hence, the same is not considered	The communication protocol shall be IEC : 61850 and the PRP / HSR protocol for Numeric Relays are not applicable.
99	Electrical Data clause no. q of Section-VI	108	The Ratings of 66KV GIS, 11KV GIS are As per Electrical data (q) GIS BB short circuit rating shall be 40KA for 3 Sec.	11 KV GIS STC rating as per electrical data shall be 40KA for 3 Sec however, as per the technical specification it shall be 26.3KA for 3 sec	Clarified at Sr. No. 91
100	11 KV GIS TECHNICAL SPECIFICATION. Clause No. 08	155	Rated current - 1250 A.	11KV GIS current rating: as per PDF Page 156: 800-1250 A As per Electrical data (q): 3150 Amps As per Specification: 2500 AMPs Following ratings are considered for 11 KV GIS Board 11 KV GIS Bus rating: 2500 Amps. Incomer & Bus Coupler - 2500 Amps. Outgoing feeders - 1250 Amps.	Clarification at Sr.No. 75 may be referred
101	11 KV GIS TECHNICAL SPECIFICATION Clause No. 4	154	Manufacturer's Design/Type Ref 11 KV GIS / 8DJH ST E.	As per the 11KV GIS specification, make and model no. is specified as 8DJH STE. Since Siemens has phased out 11KV GIS with model no. 8DJH STE, DPT to add ABB / Schneider / GGL makes for 11KV GIS	Clarification at Sr. No. 74 may be referred.



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102	Numerical Protection Relays	145	Upgradable to process bus in future as per IEC : 61850-9-2 standard.	Relay upgradable to process-bus as per IEC - 61850-9-2 protocol is unwarranted as the primary equipments would change in this case. Offered Numerical relays will not be upgradable as the primary equipments like CT, PT, Switchgear also will be required to have interface suitability for the same which is unwarranted at this stage.	The numerical relays shall be without upgradability.
103	66 KV Bus Coupler Panels Clause No. A	172	Low impedance, PRP / HSR compliant Bus bar protection scheme is specified for 66KV System.	As per the CEA guidelines, GETCO Specification and practice, Bus Bar protection is provided for 132KV and above systems. Hence, the same shall not be applicable in current tender. Hence, the same shall not be considered	Clarification at Sr. No. 98 may be referred.
104	66 KV Metering side Equipment for Item no. 4	177	Indoor type 72 KV SF-6 Circuit Breaker (3 phase) 2500 A, 31.5 KA SF-6 CB. 150/1 A, 31.5 KA 10 VA CT class 0.2 S for metering class.	In 66KV Metering side equipments (item no. 4) following are specified that are un-warranted: 2500 Amps, CB, 150/1A (4C) CT's. Circuit Breaker and Protection CT's are not applicable for 66KV Metering side equipments under item no. 4 of the tender BOQ. Hence, the same are not considered.	The Metering CTs will be for metering core with 0.2 S accuracy class.
105	66 KV Switchyard Civil Work, Sr. No.5	177	NIFPS foundation - 4 Nos.	As per the civil specification quantity for NIFPS foundations are 4 Nos. however, New NIFPS shall be 1 and old NIFPS shall be two hence, total NIFPS foundations required shall be 3 only. Only 3 Nos. of NIFPS are applicable.	The 3 nos. of NIFPS foundations are required.



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106	66 KV Switchyard Civil Work, Sr. no. 7	177	66KV LA Foundation - 23 Nos.	Foundation quantity of 66KV LA are 23 Nos. - To be clarified for so much of quantity. Only 18 Nos. of 66KV LA foundations shall be applicable.	Total 18 Nos. of LA foundations are required.
107	Technical Specification of item No. 3.2 3.5	166	This includes Disconnection, Removal, Shifting from existing position to new Substation, Installation, Testing and Commissioning of 02 Nos. (1 No. 18 MVA & 01 No. 12.5 MVA) of 66/11 KV Power Transformers with NGR, NIPS, RTCC and other accessories including Oil Sump, Oil Filtration, Refilling including top up complete in all respect earthing, protection etc. as per requirement & as directed.	500KVA existing transformer has to be shifted however, some temperature control + protection wiring as per Engineer - incharge is specified. What exactly shall be the scope. Does existing transformer have Oil pocket if the OTI is to be fixed. WT CT if WTI is to be provided? Only shifting of existing, installation, testing and commissioning of 500KVA transformer is to be considered, "temp. control + protection wiring as per engineer incharge" shall be ignored.	As per the existing provision in the 500 KVA distribution transformer, the system may be connected after shifting and installation.
108	Technical Specification of Battery & Battery Charger for item no. 8	180	- Output suitable to charge lead acid battery bank of 220 V DC	As per the battery specification there is ambiguity of the control voltage 110V DC or 220V DC? Station DC Aux. control voltage shall be 110V DC	The control voltage shall be 110 Volt DC.
109	Technical Specification of Battery & Battery Charger for item no. 8	180	As per specification Capacity will be 250 Amp-Hours. As per BOQ Supply, Installation, testing and commissioning of 110 V, 240 AH VRLA DC Battery set along with mounting racks.	Battery rating is ambiguous. As per the specification it is 250AH however, as per BOQ it is 240AH. 240 / 250 AH as per the Standard OEM rating for VRLA shall be considered.	it shall be 250 AH.

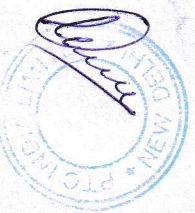


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110	G. HVAC /VRF System (Item No. 13 of BOQ)	191	<p>G.1.1. This specification covers supply, installation, testing and commissioning and handing over to Customer of Air conditioning system for the Local Control rooms & Maintenance Room in the GIS halls.</p> <p>G.1.2. Air conditioning system shall be designed to maintain the inside DBT below 24°C. Bidder shall submit necessary design calculations for customer's approval.</p> <p>G.1.3. At least 50 % spare Air-Conditioning capacity shall be provided for Local Control rooms in the GIS halls.</p> <p>G.1.4. Controllers shall be provided in Local Control room inside GIS hall for controlling and monitoring the AC units in these rooms.</p> <p>G.1.5. Each Local Control room inside GIS hall shall be provided with temperature transducer to monitor the temperature of the Local Control rooms in the GIS halls. The Temperature transducer shall have the following specification: Sensor : Air temperature sensor (indoor use) Output : 4 to 20mA Temperature range : - 5°C to 60°C Resolution : 0.1°C Accuracy : 0.5°C or better</p>	<p>HVAC/VRF system is specified for GIS Hall & Control building. However, as per BOQ separate split AC are specified for different rooms. Hence, scope and requirement of AHU, HVAC, Split AC, VRF systems are to be clarified. AHU shall be applicable for 66KV GIS Hall only. Split AC's are to be considered as per BOQ instead of HVAC / VRF system.</p>	<p>The VRF with AHU shall be for GIS system and the remaining with split ACs.</p>
111	Technical Requirement for controlled switching device	112	<p>The provision for bypassing the Controlled switching device shall be provided through BCU and SCADA both so that whenever the CSD is not healthy due to any reason (including auxiliary supply failure), uncontrolled trip/close command can be extended to the circuit Breaker.</p>	<p>Control & Relay Panels Separate BCU and Numerical protection relays are specified. As per GETCO standard practice and specification in 66KV System Comprehensive Bay Control & Protection unit (BCPU) is used. Hence, separate BCU and it's spare are unwarranted. Needs to be clarified. BCPU as per the GETCO specification shall be provided.</p>	<p>Clarification at Sr. NO. 83 may be referred.</p>



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112	Spares for 66 KV Control Relay and Protection Panels / SCADA	219	Design, Manufacture/Assemble, Supply, Installation, Testing and Commissioning of Control Relay Panel with associated equipment/accessories and shall comply with the latest editions (including amendments thereto) of all currently applicable statutes, regulations and safety codes in the locality where the equipment will be installed. The equipment shall also conform to the latest applicable standards. Nothing in this specification shall be construed to relieve the Contractor from his responsibility. The Control & Relay Panel (CRP) shall be considered as a Protection and Back up control panel to SCADA system.	Control & Relay panel component list is like conventional panel like semaphore, Annunciator, etc. However, the panel been SCADA controlled type the same are not applicable.. Shall be in line with GETCO specification for SCADA controlled panel.	It shall be as per GETCO specifications for SCADA controlled panel.
Sr. No.	Tender Clause	Pg./Cl. No.	Description as per Tender	Query raised	Clarification of DPA
113	Pre-Qualifying Criteria: Similar Work Definition	8	Similar works means: Similar works having experience in "Supply, Installation, Testing and Commissioning of 66 KV or above GIS system with associated Sub-Station (Electrical installations at GIS Sub-Station includes 66 KV or above Circuit Breaker Bays and Bus Bars) at Port Sectors/Central Govt./ State Govt./PSU/ other reputed organizations within India."	We kindly request the acceptance of our OEM experience for Gas Insulated Switchgear (GIS) work as part of the eligibility requirements.	Please refer classification of DPA Tender Conditions holds Good. at so no. 1 above.
Sr. No.	Tender Clause	Pg./Cl. No.	Description as per Tender		
114	Pre-Qualifying Criteria: Similar Work Definition	8	Similar works means: Similar works having experience in "Supply, Installation, Testing and Commissioning of 66 KV or above GIS system with associated Sub-Station (Electrical installations at GIS Sub-Station includes 66 KV or above Circuit Breaker Bays and Bus Bars) at Port Sectors/Central Govt./ State Govt./PSU/ other reputed organizations within India."	Request for acceptance of GIS retrofitting experience in technical qualification: 1. Request for inclusion of GIS retrofitting experience. 2. Request for acceptance of PMC Work completion Certificate.	Tender Conditions holds good.



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