

Reply to Pre-Bid Queries of SIEMENS LTD.

LIST OF QUERIES against Tender document Ref. No. IIT(BHU)/IPCell/IWD/2014-15/1168			
<i>Place : IIT (BHU), Varanasi, Prebid meeting dated 28.01.2015.</i>			
Sl. No.	Specification/Clause No.	Technical Queries Deviation/Comment of bidder	Remarks/Comments
1	33KV GIS (Pg 24 to 33)		
	<p>Pg 24, Clause 3.3 – Internal Arc fault Internal arc classification - AFL (for the panels with no rear access required)</p> <p>Internal arc classification - AFL (Authorised person access permitted from front & lateral side) for the panels with no rear access required.</p>	<p>a) Gas Insulated switchgears are designed and installed keeping sufficient space from all three side/back walls of substation room and should allow operator for visual inspection of GIS from the rear side as well , hence access to rear is must.</p> <p>b) For any rear access the GIS should also be type tested for internal arc from rear side which is certified by IAC AFLR class only.</p> <p>c) AFL class are obsolete worldwide now due to limited reliability and less operator safety</p>	As per manufacturer's standard design with free, floor standing at least 1000mm. gap between rear of panel & wall.
	Pg 25, Clause 4.2 – rated short time withstand current 31.5KA/3sec	Whereas in SLD , STC is mentioned as 26.3KA/3sec. Pl clarify which rating to be considered.	STC = 31.5KA/3Sec
	Pg 25, Clause 4.2.A – IAC classification AFL	<p>a) Gas Insulated switchgears are designed and installed keeping sufficient space from all three side/back walls of substation room and should allow operator for visual inspection of GIS from the rear side as well , hence access to rear is must.</p> <p>b) For any rear access the GIS should also be type tested for internal arc from rear side which is certified by IAC AFLR class.</p> <p>c) AFL class are obsolete now due to limited reliability and less operator safety.</p>	As per manufacturer's standard design.
	Pg 25, Clause 4.2.A – Dimensions ,	Depth of double bus GIS panel shall be approx 2700 and height as 2770 mm. However to accommodate LV components in LV chamber the height may increase which shall be decided during detail engg.	-----do----- -
	Pg 26, Clause 4.2.A – Paint, Color RAL7035	Our GIS shall be painted with colored code SN700 (Grey) which is our standard design and acceptable in all utilities	-----do----- -
	Pg 26, Clause 4.2.A – SF6 pressure control - IDIS	IDIS system is dependent on external aux power to show gas pressure. This is unreliable method and can easily fail in absence of aux power hence we do not recommend the same. We provide temperature compensated SCADA compatible Manometer for showing gas pressure of individual gas compartments . This is as per our standard design practice	-----do----- -
	Pg 26, Clause 4.2.A – Voltage indication system IVIS	We provide LRM with plug type voltage indication system in our standard design.	-----do-----
	Pg 26, Clause 5.1, General description , Para 1	All live parts of our GIS are SF6 encapsulated and housed inside 6 mm thick Aluminum housing sealed for IP65 degree of protection. This is type tested design as per IEC 62271-200/100 and supplied, installed in major utilities in India and abroad. This is our standard design for more than 30 years	Reason for not providing steel housing be justified.
	Pg 26, Clause 5.1.B	Current transformer shall be resin cast toroidal type which are outside SF6 gas compartment	As per manufacturer's standard design.

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	Pg 26, Clause 5.1.C) Busbar module	<p>a) In double bus design, Gas compartments for Bus bar and three position switches should be segregated and not combined together inside common gas module.</p> <p>b) With separate gas sealed modules , it allows flexibility for uninterrupted maintenance activity to be carried out in any one busbar compartment while the other bus is still in operation at 33kv level</p> <p>c) the feature mentioned in specs restricts the future maintenance activities in bus bar chamber in case of any fault etc</p>	----- do ----- ---
	Pg 27, Clause 5.3, para 5, As an option, the units can be made suitable for free-standing installation within a switch room.	<p>a) Gas Insulated switchgears are designed and installed keeping sufficient space from all three side/back walls of substation room and should allow operator for visual inspection/cleaning of GIS from the rear side as well, hence access to rear is must</p> <p>b) For any rear access the GIS should also be made suitable for free standing installation with the room</p>	Shall be free & floor standing with rear access.
	Pg 28, Clause 5.5, Busbar / panel connection	<p>a) Our design is single phase encapsulated with separate gas chamber in each panel for CB, disconnecter and for each bus bar which is monitored individually. Bus bar chamber is common horizontally for complete section</p> <p>b) In our GIS the internal bus bars are completely within SF6 insulations including joints and not outside gas compartments in air. Hence ours is true justified gas insulated switchgear with no live parts outside SF6 gas.</p> <p>c) We connect interpanel bus bars in SF6 gas compartments only and not outside SF6</p> <p>d) In GIS models which have solid insulated connection there is more possibility of arcing at interpanel joints caused due to atmospheric/ moisture deterioration of bus connection outside SF6 gas and hence is major weak point in GIS</p> <p>e) We strongly object to such design philosophy mentioned in spec as this being an unreliable connection method</p>	As per manufacturer's standard design.
	Pg 28, Clause 5.6, Gas compartment technology	<p>Our design is single phase encapsulated with separate gas chamber in each panel for CB, disconnecter for each bus which is monitored individually. Busbar chamber is common horizontally for complete section and commonly monitored for each phase for each section</p> <p>a. We confirm post commissioning of GIS there shall be no gas handling at site under normal operating conditions.</p> <p>b. However during any extension or exchange of panels in future the bus bar chamber only needs to be evacuated and after extension activity is complete bus bar chamber is re filled with gas in minimal time period.</p> <p>c. Our GIS has this advantage that while working on one bus section, other bus can be in live condition ensuring uninterrupted extension of GIS panels without any shutdown.</p> <p>d. Our design also ensures that all live parts including bus bar and bus bar joints are completely inside SF6 gas insulation making it safe for operation and touch proof. Hence our design justifies the true definition of GIS wherein no inter panel connection should be outside SF6 gas.</p>	Shall be as per manufacturer's standard design.

Pg 28, Clause 5.7, Operation of Switchgear	Basic switchgear unit is to be designed for free standing installation for reasons explained in point no 1	Free & floor standing with 1000mm. clearance between rear & wall.
Pg 28, Clause 5.8, Installation Facility:	B link is proprietary method of bus connections between two panels. We follows bolted technology which is done inside gas compartments with no exposure of busbar to air	Shall be as per manufacturer's standard design/practice.

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	Pg 30, Clause 8.1 , Current transformers	Current transformer shall be resin cast toroidal type which are outside SF6 gas compartment	As per manufacturer's standard desing.
	Pg 31, Clause 9, Cable terminations	Cable terminations shall be applicable from bottom through cellar and same shall be inner cone type	Accepted.
	Pg 33, Clause 13.5 , Proposed name of GIS Model	Siemens standard model offered is 8DB10 with all features as per manufacturer design practice	To justify the change of model.
	Pg 33, Clause 13.6 , Qualification criteria	This is prestigious project of IIT-BHU and only reputed GIS manufacturers having past proven experience should qualify with proper documentary evidences regarding GIS operational performance. There should be additional clause that bidder has to submit performance certificate of offered GIS having successful operation for minimum period of 3 years in Indian conditions/ projects	Noted.
	SLD	Bus Coupler is meant to couple Main Bus and Transfer Bus of double bus GIS. It cannot connect across the sections as shown by 89A1 & 89T1 which is confusing. Pl clarify the purpose of these disconnector	Pls. refer revised SLD.
	SLD	We assume, 89L stands for line side disconnector for outgoing feeder, 89T stands for line side disconnector for trafo feeder and 89LE stands for line side earthing switch. Also pl note line side isolators shall be of design three position disconnector (ON-OFF-EARTH) and same shall be part of GIS panel itself within SF6 compartment	Pls. refer revised SLD.
	SLD	Pl clarify LA shown in SLD is part of GIS panel or outside GIS panels in substation yard	LA outside GIS Panel.
	SLD	STC shown as 26.3KA for3 sec	STC – 31.5KA/3Sec.
	CIVIL		
	Layout/Plot Plan	Please furnish us the Layout/ Plot plan for Civil drawing.	Bidder to consider as per requirement.
	Technical Specification	Please furnish us the technical specification for the detail civil work in tender.	Forwarded.
	BOQ	Please clarify whether we have to construct three (3) building ap per the BOQ SL. NO. 7, 9(i), 10(i) i.e. GIS building, DSS-A & DSS-B.	One building for GIS, DSS - A & SCADA control room 2 nd . building for DSS-B.
	Civil building	Please clarify whether we have to construct two storied building for all the three building i.e. GIS building, DSS-A & DSS-B.	Single storied.
	Cable trench/ Underground cabling work	We required the plot plan (showing the exact locations of all buildings and other intermediate buildings including trees, other structures etc with grid line and/or coordinates for doing overall cable tray routing, overall earthing layout etc). We are not able to find out the exact route and obviously the exact length unless we get a complete plot plan from you	Plot plan forwarded. Tress if any shall be removed by IIT(BHU).
	Road-way	Whether we have to construct also the road-way/ approach road. Please provide us the detail technical specification for the same.	NO

	SCADA		
	Technical Specification	Please provide us the complete technical specification/ tentative architecture drawing for the same.	Pls. refer specification & architecture drawing.
	Make of the Transformer	We request you to please approve some other makes like Voltamp, Raychem RPG, Kirloskar in addition to the given make in BOQ.	As per revised BOQ.

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	Battery Charger		
	No. of Battery Bank & Charger	If there are three different building then we require three different set of battery bank with charger i.e. 33KV GIS, 11KV Switchboard for DSS-A, 11KV Switchboard for DSS-B, but in BOQ it not reflecting the same. Please clarify it.	One set Battery & charger for GIS & DSS-A 2 nd . set Battery charger of DSS-B.
	Technical Specification	Please provide us the technical specification battery & Charger i.e, type of Battery bank with detail feeder list of DCDB.	Provided.
	BOQ- Rating of Battery Bank	We have considered the battery bank rating as per the given in the BOQ. Any change in rating shall have the price implication.	Please refer revised BOQ.
	Make of the Battery	We request you to please approve some other makes like Exide, HBL in addition to the given make in BOQ.	-----do-----
	BOQ- Make of the Battery	We request you to please approve some other makes like Caldyne, Signotron, Liveline in addition to the given make in BOQ.	-----do-----
	Illumination System		
	BOQ- Make of lighting accessories	We request you to please approve some other makes like Bajaj, CGL, Wipro in addition to the given make in BOQ.	Philips/Wipro.
	Yard lighting (mentioned in BOQ)	We request you to please clarify whether yard lighting means the periphery of the building (GIS building, DSS-A & DSS-B).	Yard lighting meant for transformer (6MVA) & other outdoor equipments along with periphery of buildings.
	Earthing		
	Earth-resistivity	Please inform us the earthing resistivity for detail earthing estimation/ calculation	20 ohm – meter.
	COMMERCIAL QUERIES		
1	Article 9 : Terms of Payment	Interest bearing advance against ABG	Advance will not be Interest Bearing.
2	Article 25 : Applicable Law and Dispute Resolution	For resolution of any Dispute, IIT(BHU) shall appoint one arbitrator.	Arbitrator will be appointed by IIT(BHU), Varanasi
3	Bank Guarantee Format	Not attached.	Provide Bank Guarantee in your own format
4	Payment terms for Civil work	Payment terms for civil portion is not mentioned. So, request you to please furnish the same.	Same as of ETC.

5	Mode of Ordering	For Supply and ETC, two separate order shall be released to successful bidder.	Two different orders for supply and for ETC & Civil.
6	Time Extension for Submission of Bid (Pg-3)	Time given for bid submission is 06.02.2015	Already Extended.