



**RAJASTHAN RAJYA VIDHYUT PRASARAN NIGAM LTD**  
**REGD. OFFICE: VIDYUT BHAWAN, JANPATH, JYOTI NAGAR, JAIPUR**  
**OFFICE OF THE SUPERINTENDING ENGINEER (400 kV DESIGN)**  
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NO. RVPN/SE (400 kV DESIGN)/XEN(R&D)/TN-282/ D. 1435

JAIPUR, DT 21.07.10

As per enclosed list

Sub: - Establishing of 2x50MVA, 132/33kV Hybrid GIS Substation (including of IEC-61850 based automation system) at existing 33kV Substation Kuri Bhagtasani (Jodhpur) including supply of All Equipments / Materials, Erection (Including Civil works), Testing and Commissioning.-Clarification,/Corrigendum against RVPN/EHV/TN-282

Dear Sirs,

The clarification/amendment asked by prospective bidder(s) against TN-282 is enclosed at Annexure-I as "Pre Bid Queries".

Clarifications/Replies to all the queries are available on our website [www.rajenergy.com](http://www.rajenergy.com) in downloadable form, and the same are being sent through e-mail, at the e-mail address furnished by you on bid request letter, for ready reference.

Yours faithfully,

Sd/-  
(M.L.Mathur)  
Superintending Engineer

TN-282

1

M/s Larsen & Toubro Limited  
Mount Poonamallee Road,  
Manapakkam, P.B. No. 979,  
Chennai – 600 089

2

M/s Areva T & D India Limited  
106, 1<sup>st</sup> Floor, Sangam Tower,  
Church Road, Jaipur-302001

**binod.joshi@areva-td.com**

3

M/s Tesla Transformers Limited  
30-B, Industrial Area,  
Govindpura, Bhopal-462023

**projects@teslatransformers.com**  
**tesla@bsnl.in**

4

M/s Bharat Heavy Electricals Limited  
Regional Operations Division,  
Nehru Place, 1<sup>st</sup> Floor, NF/O/03,  
Tonk Road, Jaipur – 302015

**bsaha@bhelindustry.com**

5

M/s ABB Limited  
C-116, “Alaknanda”, IInd Floor,  
Behind Vidhan Sabha, Janpath,  
Jaipur – 302015

**pankaj.sodhiya@in.abb.com**

6

M/s EMCO Limited  
Plot No.-F5, Road No. 28,  
Wagle Industrial Estate,  
Thane - 400604

**projects@emcoindia.com**

**Pre – Bid Queries**  
**RVPN/EHV/TN-282**

**Annexure-I**

<b>S. No.</b>	<b>Reference</b>	<b>Existing Clause</b>	<b>Comments/Clarification</b>	<b>RVPN Clarifications/Comments</b>
1.	Cl. No. 4.1.2 / Section – III (33 KV GIS) / Volume – II (TS) (Page 4 of 18)	Cubicles must be made -up of stainless steel boxes, completely segregated one from the other, containing the power parts of the cubicle. These stainless steel boxes will be molecular sealed; the degree of protection on the external part of the cubicle will be IP4X.	We would like to inform you that we shall be offering IP 65 for Gas compartments & IP 4X for Low Voltage compartments. However since there are operating apertures in Drive mechanism, the operating fascia, we confirm IP 3X for the same. Request you to confirm the same.	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant standards, safety & maintenance requirements, functional performances etc. during bid evaluation.
2.	Cl. No. 4.1.8 / Section – III (33 KV GIS) / Volume – II (TS) (Page 4 of 18)	The pressure of SF6 gas inside shall not be more than 1.3 Bar. The switchgear design shall be such that even at 1 Bar ( Atmospheric Pressure) the basic insulation levels as specified can be maintained. The current rating of the feeders shall be maintained at this pressure so as no gas refilling is required at site.	We would like to inform you that Atmospheric pressure the basic insulation level as specified can be maintained except impulse, we confirm 140 KVp for lightning impulse at atmospheric pressure of SF6. Request you to confirm the same.	Manufacturer specific design variations are acceptable, subject to meeting of functional requirements and compliance to relevant IEC/IS standards
3.	Cl. No. 4.1.12 / Section – III (33 KV	Internal parts of circuit breakers must be accessible for	Please note that as the offered 33 KV GIS is a fixed type Gas	Manufacturer specified minor design variation are acceptable

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
	GIS) / Volume – II (TS) (Page 5 of 18)	maintenance. The latter must be removable keeping busbars and cables energized, once opened busbar and cable side isolators.	insulated switchgear circuit breaker so internal parts of circuit breakers shall not be accessible for maintenance keeping bus bar and cables energized. Request you to confirm the same.	subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant standards, safety & maintenance requirements, functional performances etc. during bid evaluation.
4.	CI No. 4.4.2 / Section – III (33 KV GIS) / Volume – II (TS) (Page 6 of 18)	<p>i). operation of busbar and cable side isolators if the circuit breaker is closed</p> <p>ii). operation of circuit-breaker during busbar and cable side isolators operation</p> <p>iii). closing of the earthing switch when busbar and cable side isolators are closed and, in incoming unit, without consent from the upstream switchboard.</p>	We would like to inform you that there is no separate cable side isolator required / available in MV-Gas insulated switchgear design. Three position disconnecter switch shall be offered with Isolator ON-OFF (to connect to the Bus) & Earth Switch ON-OFF position (to achieve the feeder cable earthing via circuit breaker). The 3 position disconnecter switch is mechanically & electrically interlocked with the CB for confirming the offload operation of isolator and earthing switch. Request you to confirm the same.	Please refer 33kV side SLD which do not require line side Isolator. Other requirements of safety & maintenance shall be as per functional requirements and compliance to relevant IEC/IS standard
5.	Cl. No. 4.6 / Section – III (33 KV GIS) /	Connections for power cables must be plug in type, according to	Please note that for the offered switchgear, Plug in type / bolted	Pl. adhere to specification requirement.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
	Volume – II (TS) (Page 6 of 18)	DIN 47637 or relevant IEC. Testing of cable shall be possible without disconnection of Power cables.	outer cone type cable termination offered. We confirm that testing of cable shall be possible without disconnection of power cables. Request you to confirm the same.	
6.	4.9 (iv) / Section – III (33 KV GIS) / Volume – II (TS) (Page 15 of 18)	There shall be some pressure sensors which are unaffected by electromagnetic interferences and which much reduce the duration of the arc in switchboard, directly controlling opening of the circuit breakers which supply the fault.	We would like to inform you that our offer does not include any arc limitative sensors to reduce the duration of the arc. Please note that even without these sensors, the offered switchgear is fully internal arc type tested according to IEC IAC AFL. Request you to confirm the same.	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant standards, safety & maintenance requirements, functional performances etc. during bid evaluation.
7.	Cl. No. 5.1 (iii) / Section – III (33 KV GIS) / Volume – II (TS) (Page 7 of 18)	Internal parts (main and arcing contacts) of circuit breaker must be accessible for maintenance simply removing front cover, with no operations on SF6 compartments. This maintenance operation shall be carried out by skilled personnel only, both on energized or out of service switchboards.	We would like to inform you that this is a fixed type Gas insulated switchgear circuit breaker so internal parts main & arcing contacts of circuit breakers shall not be accessible for maintenance. SF6 work is involved in case of maintenance required on main and arcing contacts located inside the circuit breaker tank. Request you to confirm the same.	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
8.	Cl. No. 5.1 (xiii) / Section – III (33 KV GIS) / Volume – II (TS) (Page 7 of 18)	The vacuum circuit breaker shall form a completely independent & interchangeable module so that in case of failure, the VCB can be replaced, in least time.	We would like to inform you that this is a fixed type Gas insulated switchgear circuit breaker, so interchangeability is not applicable. Request you to confirm the same.	standards,safety & maintenance requirements,functional performances etc.during bid evaluation.
9.	Cl. No. 5.2 iv) / Section – III (33 KV GIS) / Volume – II (TS) (Page 9 of 18)	In the circuit breaker cubicles the operation of both busbar and cable side isolators must be simultaneous, operated from the front part of the cubicle. This operation must be interlocked with the relevant circuit breaker and earthing switch.	There is no separate cable side isolator available in MV-Gas insulated switchgear design. Three position disconnect switch shall be offered with Isolator ON-OFF (to connect to the Bus) & Earth Switch ON-OFF position (to achieve the feeder cable earthing via circuit breaker) Request you to confirm the same.	Pl. refer reply at s.no. 4 above.
10.	Cl. No. 5.4.1 / Section – III (33 KV GIS) / Volume – II (TS) (Page 9 of 18)	Current Transformer: i. The current transformers, Inductive type, shall be in accordance to IEC 60185, IEC 60044-3 read with latest revisions and the general requirements as detailed in foregoing paras of specification The current transformers	Please note that the Current transformers as toroidal-core current transformers, foil insulated mounted outside of the gas compartments on earthed housing components (not subject to dielectric load from the high voltage) The VA burden requirement of MICOM series relay is less than 1 VA on CT circuit. It is also very	Pl. refer clause 5.4.1, ii, note of section-III, Vol. II of specification.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
		<p>shall be conventional type and shall comply with the ratings indicated in the single line diagram. They shall be wound core type and shall be located inside/outside the gas compartment. The secondary wiring of 2.5 sqmm shall be taken out to the LV compartment via bushings.</p> <p><u>CT Details</u>  <u>Incomer Feeder &amp; Bus-Coupler</u>  1000-500/1/1/1A  Core 1: 5VA, Class 0.2  Core 2: 10VA.5P15  Core 3: Class X, V<sub>kp</sub> &gt;=150V, Ret &lt;- 4 Ohms</p> <p><u>Outgoing Feeders</u>  600-300/1/1A  Core 1: 5VA, Class 0.2  Core 2: 10VA, 5P15</p>	<p>difficult to get a high VA burden in Ring Core CTs as asked for in the specification. We therefore suggest that VA burden of both metering &amp; protection core should be 5 VA. This is more than sufficient to take care of the protection requirement. Suitable burden calculation shall be submitted during detailed engineering. Request you to confirm the same.</p>	
11.	Cl. No. 5.4.2 iv) / Section – III (33 KV GIS) / Volume – II (TS) (Page 10 of 18)	P.T. PARTICULARS a. Ratio 33000/V <sub>3</sub> / 110/V <sub>3</sub> / 110/ V <sub>3</sub> b. Burden: 40VA	We would like to inform you that the offered 33 KV GIS switchgear has single-pole inductive voltage transformers arranged outside of the gas-	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
		<p>c. Class of Accuracy: 0.2/3 P  d. Voltage Factor: 1.2 continuous &amp; 1.9 for 30 seconds.  e. 3 Nos. Single Phase P.T. shall be connected in Star formation</p>	<p>filled compartments without primary fuse  1) With contact-proof enclosure  2) Flanged to the switchgear via plug-and-socket connector on the primary side  3) Disconnecting device with the positions "Voltage transformer - ON" and "Voltage transformer - earthed" integrated optionally in the switchgear on the high-voltage end  4) No removal of switchgear components in case of voltage tests of the switchgear and the cables.  For protection and metering are through numerical relays, the burden requirement will very less. We propose 15VA burden &amp; shall substantiate this with suitable calculations during detail engineering. Also due to compact size of switchgear panel and requirement of high accuracy class i.e. 0.2, 40VA burden for VT's is not achievable. Request you to confirm the same.</p>	<p>subject to Type &amp; Acceptance testing as per IEC &amp; relevant standards,safety &amp; maintenance requirements,functional performances etc.during bid evaluation.</p>

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
12.	Cl. No. 5.4.4 / Section – III (33 KV GIS) / Volume – II (TS) (Page 10 of 18)	The current and voltage transformers shall have cast resin insulation, and be suitable for installation inside the cubicles and be free of partial discharges.	We would like to inform you that the offered 33 KV GIS switchgear has Current transformers shall be toroidal-core current transformers foil insulated mounted outside of the gas compartments on earthed housing components (not subject to dielectric load from the high voltage) Request you to confirm the same.	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant standards,safety & maintenance requirements, functional performances etc. during bid evaluation
13.	Cl. No. 5.7 ii) / Section – III (33 KV GIS) / Volume – II (TS) (Page11 of 18)	Double Pole control of up to 2 circuit Breakers & 5 Disconnectors (depending on the version and equipment fitted)	We would like to inform you that for control of CB & disconnector Mechanical crank and PB are provided on the front fascia of the panel, also for electrical operation PB, TNC switch shall be provided, so separate function for control through Numerical relay is not required, so not offered. Request you to confirm the same.	Pl. adhere to specification requirements.
14.	Cl. No. 5.7 ii) / Section – III (33 KV GIS) / Volume – II (TS) (Page11 of 18)	Separate Display of the switching status of up to 8 switching devices on the front display.	We would like to inform you that for switching status of CB & disconnector Mechanical indicator directly connected to	Pl. adhere to specification requirements.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			the drive are provided on the front fascia of the panel, so separate front display for through Numerical relay is not required, so not offered. Request you to confirm the same.	
15.	Cl. No. 5.7 ii) / Section – III (33 KV GIS) / Volume – II (TS) (Page12 of 18)	Graphical display on the front shall be an integral part of the unit. It shall display dynamic statuses of CB, Disconnectors etc. on a programmable single line diagram.	We would like to inform you that for graphical display of CB & disconnector Mechanical indicator directly connected to the drive are provided on the front fascia of the panel, so separate Graphical display through Numerical relay is not required, so not offered in Numerical relay. Request you to confirm the same.	Pl. adhere to specification requirements.
16.	Cl. No. 5.7 ii) / Section – III (33 KV GIS) / Volume – II (TS) (Page12 of 18)	It shall be possible to achieve redundant communication, hence preferably two serial communication ports shall be provided.	We would like to inform you that in the offered relay one number IST rear port with IEC 61850 protocol shall be provided & second rear port is with IEC 60870-5-103 protocol. Request you to confirm the same.	Confirmed
17.	Cl. No. 5.7 ix) / Section – III (33 KV GIS) / Volume – II	The BCU shall have minimum 14 binary inputs, 5 Power	We would like to inform you that In the offered relay there are 10 Nos. binary inputs and	Pl. adhere to specification requirements.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
	(TS) (Page 13 of 18)	Outputs & 5 Signal output for control of various equipments, P139 relay is with 10 digital input and 14 digital output which is suitable for control of various equipments.	14 Nos. outputs which is suitable for control of various equipments. Request you to confirm the same.	
18.	Cl. No. 5.8 i) / Section – III (33 KV GIS) / Volume – II (TS) (Page 13 of 18)	For indoor panels painted colour bands shall be used for the mimic bus. The mimic diagram shall be on eye level. Equipments such as circuit breakers, isolators, current transformers, voltage transfonners etc. shall be represented by suitable symbols. The colour shall be Red Shade 537 of IS-5.	Please note that standard mimic shall be provided as follows for feeder panel, mimic for current transformer and voltage transformer is not available in standard design / so not offered. Color shade is white as per the standard AREVA design. Request you to confirm the same.	Manufacturer specific design variations are acceptable, subject to meeting of functional requirements and compliance to relevant IEC/IS standards.
19.	Cl. No. 6.01 vi, vii) / Section – III (33 KV GIS) / Volume – II (TS) (Page 15 of 18)	Rated filling level for insulation : 130 kPa  Alarm level for insulation : 120 kPa	We would like to inform you that rated filling pressure pre at 20°C for the feeder panels is 0.05 MPa. Alarm level 0.03MPa. Request you to confirm the same.	Manufacturer specified minor design variation are acceptable subject to meeting of functional requirement. However, evaluation of specific make/model shall be subject to Type & Acceptance testing as per IEC & relevant standards,safety & maintenance requirements, functional performances etc. during bid evaluation

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
20.	Cl. No. 6.02 / Section – III (33 KV GIS) / Volume – II (TS) (Page 15 of 18)	3 position switch and switch-disconnector: Rated current: Feeder 1250 A Bus-Coupler 2000 A Transformer I/C 1600 A	We confirm to provide above ratings considering design ambient temperature as 40 deg C. At 50 deg C ambient de-rating is applicable for above rating. Request you to confirm the same.	Pl. refer clause 3.1 of section-III, Part-III, Vol.II, specification ratings to be met at 50 deg. C.
21.	Cl. No. 29.11 / Section – GTR / Volume – II (Page 30)	At least 20% spare terminals shall be provided on each panel/ cubicle/ box and these spare terminals shall be uniformly distributed on all terminal rows.	We would like to inform you that spare terminals shall be provided as per spare terminal availability and the space available in the low voltage compartment during detailed engineering. Request you to confirm the same.	Should meet the functional requirement.
22.	Volume-I-Part-VI, Schedule-B1	S-XIV-1	As per schedule B1, there are 4 nos of 132kV isolator with single earth switch. But as per SLD, there are 2nos of in two incoming line bays, 2 nos in two transformer bays and 2 nos in bus PT bays. Hence the summation of all these is 6 nos. Please clarify.	Pl. adhere to 04 Nos. of 132 kV Isolators with single Earth Switch as per specification BoQ.
23.	Drg No. RVPN/TN-282/DRG-1 & Drg No. RVPN/TN-282/DRG-2	-	As per SLD the bus PTs are connected to main bus-1 & main bus-2 through isolator. But the same connection of PT	No. Isolator is required for Bus PT. Electrical layout shall prevail. 132 kV Bus PTs are of conventional AIS type.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			<p>&amp; isolator to main buses is not shown in layout drawing. Please clarify. Also we presume these PT &amp; isolator are of conventional air insulated type. Please confirm</p>	
24.	Volume-II-Part-I, Page 2	1.1.2	<p>This clause says that the proposed substation is to built at existing 33kV substation at Kuri Bhagtasani. No where in the specification the drawings of the existing 33kV substation layout is shown . In this view we understand that the existing 33kV substation is to dismantled &amp; new proposed substation is to be built in that place or kindly furnish the overall plot plan showing the proposed substation &amp; existing 33kV substation.</p>	<p>No, the sub station is in the same premises as that of 33 kV sub station. The proposed 132/33 kV sub station switchyard is in available vacant land.</p>
25.	Volume-II-Part-I, Page 7	2.11-b-i-a	<p>As per this clause we presume that only space to be provided for the 132kV future bays. No equipments to be considered for future bays. Please clarify.</p>	Confirmed.
26.	Drg No. RVPN/TN-282/DRG-4(1)	Ground Floor Plan	<p>We presume the switch room shown in the drawing is the space to accommodate 33kV</p>	<p>Yes, 33 kV GIS switchgear shall be installed in Switch Room indicated in drawing with the rear</p>

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			GIS switchgear. Please confirm in order to enable us to estimate interconnection cable and terminations, lighting, etc.	of switchgears facing towards Power Transformers.
27.	Drg No. RVPN/TN-282/DRG-4(1) & Drg No. RVPN/TN-282/DRG-4(2)	Ground Floor Plan & First Floor Plan	Please refer the control building layout and clarify in which room the 132kV control & relay panels is to be accommodated since there is no control & relay panel room shown in the layout.	C&R panels shall be accommodated in Switch Room.
28.	Volume II (Part-III of III) - section-V-A-C&R-SAS	Clause 2.0	We presume that the 132 kV C&R panels for future feeder bay are not in the scope of contractor. Please clarify.	Confirmed. However, the remote end C&R panels are to be included which is clearly mentioned in the said clause.
29.	Volume-I-Part-VI, Schedule-B1	S-III-1	As per this clause of 33kV GIS, we understand that the 33kV GIS panel shall be provided with integrated control & relay protections. So there is no requirement of separate 33kV Control & relay panels. Please confirm.	Confirmed.
30.	Volume II (Part-III of III) - section-X-Lighting system	Clause 7.2 Indoor lighting	As per the mentioned clause, For GIS building shall be illuminated using enclosed type high bay luminaires having 250W MH fixtures and 1X100W GLS downlighter. But in clause	Pl. adhere to the specification BoQ. Sub station Control Room & GIS Hall building shall be illuminated with these fixtures. The bidder is required to submit energy efficient lighting system

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			7.5 of Volume II (Part-III of III) - section-X- Lighting system and Price schedule-B1 of part-VI Volume-I, the same types of fixtures are not given. Please confirm the type of fixtures to be used for GIS building illumination.	design as per specification or equivalent and to be approved by Nigam.
31.	Volume II (Part-III of III) - section-X- Lighting system	Clause 5	As per the mentioned clause, from lighting panel to sublighting panel shall be 415V PVC armoured Al. power cables of size 3.5Cx16sq.mm. But as per (Volume II (Part-III of III) - section-XVIII- Power & control cables, clause 3.0), the same is mentioned as 4Cx16 sq.mm PVC Al. Please clarify.	It shall be 4CX16 sq. mm. which is available in the BoQ also.
32.	Volume II (Part-III of III) - section-XVI- LT Switchgear	Annexure-V2-P3-S16-1	As per this drawing of LT panels AC distribution arrangement , 11/0.4kV, 250kVA LT Transformer( for future) is shown. Kindly clarify if supply of this transformer is covered under our scope of supply.Also confirm the scope of supply of incoming cable to Main ACDistribution board from this transformer.	No, Pl. adhere to the quantity specified in the BoQ only.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
33.	Volume-I-Part-VI, Schedule-B1	S-III-2	As per this clause, cable termination/plug in 33kV GIS shall be considered for 6 nos of outgoing bays only. Since there are total of 7 nos of outgoing bays, we presume that termination for remaining one no of 33kV outgoing bay connecting to Station transformer is also to be included in our scope. Please confirm.	Confirmed
34.	Volume-II-Part-I, Page 8	2.11-b-ii-10	As per specification there are 7 nos of outgoing 33kV bays in 33kV GIS. As per referred clause, the incoming supply to the 33/0.415kV station transformer is fed from the outgoing 33kV bays of 33kV GIS. In this regard we presume that out of 7 nos of outgoing bays of 33kV GIS, 1 nos of 33kV GIS outgoing bays is feeding 1 nos of 33/0.415kV station transformer & the remaining 6 nos are outgoing.	Confirmed.
35.	Drg No. RVPN/TN-282/DRG-2	-	Kindly furnish substation layout showing the legend of various equipments in the switchyard	Symbols shown are generally used for equipments, may be co related/read with Drg-1 (SLD)

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			as the same is not shown in the layout.	
36.	Volume-I-Part-VI, Schedule-B1	S-XVII	We presume the earthing quantity mentioned under earthing system includes the requirements of outdoor GIS, Outdoor switchyard, control building & indoor 33kV GIS. Please confirm.	Confirmed.
37.	Volume-I-Part-VI, Schedule-B1	S-XIII & S-XV-9	Kindly furnish the height of Lightning Cum Lighting Mast for checking the Lightning protection coverage for the entire substation	The design is in the scope of successful bidder as per Section-XIII, Part-II of specification.
38.	Volume II (Part-III of III) - section-II- Hybrid GIS	7.0-ii	As per this clause please clarify the scope of supply of auto <b>crane</b> for 132kV hybrid GIS	No supply is envisaged in the scope.
39.	Soil Investigation.		Please furnish the soil investigation report/bore log data & water table of switchyard area if available.	Fairly levelled land. FGL to be decided during Detailed Engineering, keeping in view the water drainage level with respect to main road etc.by successful bidder and to be approved by Nigam.
40.	Site survey		Please furnish Contour map & FGL for the proposed Substation.	
41.	General		Please furnish the existing 33kV Kuri Bhagtasani Switchyard layout.	Not required as it is in separate land not related with proposed scope of work in this project.
42.	VOL II-PART-I-PROJECT-2.3. Civil		Please furnish the details of existing Boundary wall.	Boundary wall on one side towards 33 kV sub station (85

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
	works clause 2.3.2. xiii.			m.) i.e. towards passage for 132 kV line is shown in Drg-2 is not available. Unit rate of fencing to be furnished in schedule B-3, the work to be done as per requirement during Detailed Engineering at actuals. Bidder may visit site to collect more information if required.
43.	Schedule -B3. P.VI. VOL-I	S-XIII & S-V, 8 & III-Civil Works 2(ii)	In Structure BPS the quantity for Surge Arrestor is 12, But in Foundation for the same is given as 6. please clarify the same.	It is correct. Pl. see that Surge Arrestors, Surge Arrestor (High level) are 06 Nos. each which totals 12 Nos.
44.	Schedule -B3. P.VI. VOL-I	III-Civil Works, 1	Please furnish the details of dismantling of existing buildings/structures/foundations .	No such structure is in proposed land of the sub station and as such no major dismantling is envisaged, except for site leveling etc. defined in the specification.
45.	Vol-II, Part -III, Section -XII Technical Spec for Air Conditioning System	General 1.2	Please inform the control room location in the layout .	Switch Room shown is the Control Room
46.		General 1.2	We have considered AC for the following rooms : 1) Switch Room 2)Comm/Automation Panel	Confirmed.

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
			3)Scada Room 4) Conference Hall 5)Battery Room considered as per layout. Please confirm whether our assumption is correct or not.	
47.	-	DRG.No.RVPN/TN-282/DRG-4[1] DRG.No.RVPN/TN-282/DRG-4[2]	Exhaust Fans to be provided for toilets kindly confirm,( Exhaust system for toilets)	Yes
48.	-		Please confirm the height of false ceiling to be consider for heat load calculation ( our assumption is of 3m )	It should be considered as 3.3 m. for the heat load calculations.
49.	-		Please confirm the orientation of the building	Orientation of the building is shown in the Layout drawing Drg-2 with entry gate etc.
50.	Volume - I, Part VI - Bid Proposal form, Annexures, Schedules.	Annex - B Price Adjustment / Price Basis, b) - Price Adjustment Ceiling, 1 - Ex. Works Component	From this clause, we understand that Price variation is available for LT & Auto Transformer without ceiling. Kindly confirm that Price variation is also applicable for 50MVA, 132/33kV Power Transformer without ceiling.	Confirmed.
51.	Volume - I, Part III, General Conditions of Contracts	9.7 Terms of Payment, A, (iii) - Progressive Payment a), b) & c)	We assume that balance 90% of payments for spares will be paid on receipt of material at site. Please confirm.	Pl. adhere to the specification requirements

S. No.	Reference	Existing Clause	Comments/Clarification	RVPN Clarifications/Comments
52.	Volume - I, Part VI - Bid Proposal form, Annexures, Schedules.	Schedule B1, B2, B3 & BU of Price Schedules	The Price schedule furnished in the tender document is not readable due to very small font used. We request you to issue readable hard copy, since hard copy will take precedence over soft copy provided by you.	Pl. refer soft copy available with the bid document
53.	General		We presume that all the type test reports would be submitted on award of contract / before dispatch of the Equipments / materials, and no need to submit along with our offer. Please confirm.	The Type tests of the items/equipments covered under Qualification Requirements are to be submitted along with offer for evaluation.