



**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-279/ D. 1488

JAIPUR, DT 26.07.10

As per enclosed list

Sub: - Establishment of 2x160MVA, 220/132kV GIS Substation (including of IEC-61850 based automation system) at existing 132kV Substation Nala Power House (Jaipur) alongwith 220kV Terminal Bay at 400kV Substation Heerapura including Supply of all Equipments/Materials, Erection(including civil works), Testing and commissioning.  
-Clarification,/Corrigendum against RVPN/EHV/TN-279

Dear Sirs,

The clarification/amendment asked by prospective bidder(s) against TN-279 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-279

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

Crompton Greaves Limited  
3<sup>rd</sup> Floor, Tower A,  
DLF Cyber-Green, Sector-25-A,  
DLF Phase-III, Gurgaon-122002  
Haryana, India

**ankur.aggarwal@cgglobal.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 Bharat Heavy Electricals Limited  
Regional Operations Division,  
Nehru Place, 1<sup>st</sup> Floor, NF/O/03,  
Tonk Road, Jaipur – 302015

**bsaha@bhelindustry.com**

7

M/s Siemens Limited  
Plot No. 6A, Sector 18,  
Maruti Industrial Area,  
HUDA, Gurgaon – 122015

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**Rishi.maggon@siemens.com**

**Pre Bid Queries****Annexure-I****NIT No. RVPN/EHV/TN-279****Establishment of 2x160MVA, 220/132kV GIS Substation (including of IEC-61850 based automation system) at existing 132kV Substation Nala Power House (Jaipur) alongwith 220kV Terminal Bay at 400kV Substation Heerapura including Supply of all Equipments/Materials, Erection(including civil works), Testing and commissioning.**

S.No.	Document Volume/Section & Page no.	Reference Clause	Queries	Reply
1.	General	Schedule-B1, Sl.no. S-XIII & S-XV	Please provide the sectional drawings for 220& 132kV outdoor bays for estimating the busbar materials.	The layout drawings furnished indicate required details. Bidder may visit site at his cost for further details, if, required.
2.	Scope-220kV Indoor GIS Switchgear Equipments	Schedule-B1, S.No. S-II	In the schedule of items, one number of cable (incoming/outgoing) bay (FUTURE) is not mentioned. Where as in SLD, GIS room layout and STR same is mentioned. Please confirm the scope of supply.	Pl. quote as per the BoQ quantity.
3.	General	Space for out door switchyard	Please confirm whether dismantling of any out door equipment/building to be considered for the proposed new bays & control room in Heerapura & NPH substations.	The scope of dismantling is already mentioned in clause 11.0 ii) S.No. 5 (Part-I, Vol.-II)
4.	Technical specification	Vol-II Part-I, Clause 11.0(ii), page.17	Please provide us the detailed specification of TCMS as specified for existing RTCC panels.	Please refer clause 1.23, Section-I, Auto Transformer.
5.	SCOPE-C&R panels	Schedule-B1, S.No.-S-V A,B	In the schedule, Control & relay panel for Feeder Type-FCB is given as 4. Where as in SLD, GIS room layout only 3 numbers of such feeders are mention (including the one mentioned "Future").	The same is correct and 02 Nos. considered for remote end.

			Please confirm the scope of supply	
6.	Technical specification	Vol-II, STR, Section-V-C&R-SAS, page-65	There are two BPU's specified for back up protection for 220kV transformer relay panel. We feel one is sufficient for back up protection. Please confirm the same.	Please quote as per specification. Protection for HV & MV side considered.
7.	Schedule B1, P-VI, Volume-1 & DEG.No. RVPN/EHV/TN-279/DRG-1(a)	S.No. 14	Total No. of 33 kV bays are 15 Nos. as per SLD. Two bays have to be accommodated in one panel. Then the quantity of panel should be 9 nos. whereas in BOQ quantity is 8 Nos. Kindly clarify.	The quantity of Item No. 14, S-VAB (Schedule, B1, B2 & B3) stands amended to 9 Nos.
8.	Schedule B3, P-VI, Volume-1 & RG No. RVPN/EHV/TN-279/DRG-1(a)	S.No.15	Total No. of 11kV bays are 17 nos. as per SLD. Two bays have to be accommodated in one panel. Then the quantity of panel should be 9 Nos. whereas in BOQ quantity is 8 nos. Kindly clarify.	The quantity of Item No. 15, S-VAB (Schedule, B1, B2 & B3) stands amended to 9 Nos.
9	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 is Control Room.

10	Vol-II, Part-III, Section-XII Technical Spec for Air Conditioning System	Clause No. 1.2	We have considered AC for the following rooms: 1) Switch Room 2) Battery Room 3) Scada Room 4) Comm Room 5) Conference Hall Considered as per layout. Please confirm whether our assumption is correct.	Confirmed
11	Vol-II, Part-III, Section-XII Technical Spec for	Cl. No. 2.2	Specification calls for Hi-wall Splic AC, were as ground floor shows Ahu room. Please confirm the type of the system	AHU room is for GIS Hall only.

	Air Conditioning System			
12	DRG No. RVPN/EHV/TN-279/DRG-5(1) DRG No. RVPN/EHV/TN-279/DRG-5(2)		Pressurised Ventilation system to be considered for GIS hall, please confirm.	Confirmed.
13	DRG No. RVPN/EHV/TN-279/DRG-5(2) DRG No. RVPN/EHV/TN-279/DRG-5(3)	-	Ventilation Fans to be provided for toilets kindly confirm	Confirmed
14	General	-	Please confirm the height of false ceiling to be consider for heat load calculation (our assumption is of 2.4m) & Number of people in the respective rooms	It should be considered as 3.3 m. for the heat load calculations.

15	Table-1 Pg No. 45, Vol-III Civil Works	Internal Finish Schedule	Please furnish the finishing details for AHU, Switch Room, Scada and Comm. Room, Lab/Workshop	Shall be designed and submitted by successful bidder during Detailed Engineering as per specification and to be approved by Nigam.
16	Vol-II, Part-I, Project	Cl. No. 2.3.1	Please furnish the FGL of the Proposed Substation Area.	The contour map of existing switchgear is furnished in Drg. 10&11 (all layers in the AutoCAD file be selected). The 220 kV GIS Hall & Control room building is to be

				established in the identified location i.e” Damaged Tin Shed” in these drawings.
17	Vol-II Part-I, Project	Cl. No. 2.3.2(i)	Please furnish the geotechnical investigation reports of proposed project site conducted earlier, if available, which will facilitate us to estimate foundation & quantity.	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.
18	Vol-II Part-I, Project	Cl. No. 2.1.2	Kindly provide us details of Seismic zone & wind speed to enable us to design civil & structural work.	Refer GTR/GTC clause No.33.0 Vol.II part-II
19	Vol-II Part-I, Project	Cl. No. 2.11- b-ii) i	The scope of work includes site leveling, whereas schedule B3, there is no item description pertaining to site leveling. Kindly clarify whether site leveling to be included in our scope of works.	Pl. refer item –III, 1 Civil works in Schedule B-3 which cover the leveling work. The site preparation of GIS & Control room building & bays under the project is in scope of successful bidder.

20	Volume I (Part-II)- Bid Data Sheets	S.No. 8 – iii), ITB 11.4	We request you to provide us ‘C’ form once in 3 months to avail sales tax benefits for all the supplies completed in that particular quarter ( 3 months), instead of providing the same after completion of entire supplies	It shall be furnished as per the statutory provisions.
21	Volume I (Part-III)-	Cl. No. 9.7	We request you to give us interest free advance of 10% for	Pl. adhere to specification

	General Conditions of Contract		supply, Erection & Civil works price components, of the contract value	requirements.
22	Volume I (Part-III)- General Conditions of Contract	Cl. 12.3.1	With reference to the basis of Price offer, we are requesting you to include GIS equipment under variable basis. As per the referred clause, you have specified that CB, CT, CVT & LA are on variable basis and price can be adjusted as per IEEMA. We believe you are very well aware that GIS comprises of CB, CT, CVT & LA as single module. Hence request you to include GIS equipments also under variable price basis for which price adjustment is applicable as per IEEMA.	Adhere to specification requirement.
23	Volume I (Part-III)- General Conditions of Contract	cl. no. 38.0	In reference to this, we presume that “HIGH SEA SALE AGREEMENT” will be effected for imported items and accordingly taxes are to be considered by us in our price offer.	Pl. adhere to specification requirement.
24	QR	Clause 1.1 i)	As per QR the bidder has to submit the documents for 145 kV GIS where as 145 kV GIS is not required for the subject tender. Request also for 3 weeks extension in bid opening date	This is a generalized Qualification Requirement of 220/132 kV GIS Sub station and particular project shall be evaluated for applicable rating of GIS switchgear. Pl. adhere to specified schedule.
25	Substation Automation System for complete substation (new as well as existing Switchyard).	Cl no:2.1.1 (xix) / Part – I (Project) / Volume – II (TS) (Page 3)	We request you to provide the existing substation SCADA Make and Type at Nala Power House Substation and Heerapura Substation to enable us to quote accordingly.	At present no SCADA is available at Nala Power House Sub station. At 400 kV Heerapura sub station, integration to SCADA is not in the scope of bidder.
26	Interfacing and Integration for	Cl no: 2.2.1 (iv)	We request you to provide the details of interfacing required at Nala Power House Substation and Heerapura	Details of terminal equipment is given in

	establishment of Digital PLCC/ Fiber Optic communication link between Proposed Substation, 400 kV existing Substation at Heerapura and NPH for protection and data transfer to SLDC Heerapura.	/ Part – I (Project) / Volume – II (TS) (Page 4)	Substation.	clause 11 ii) S.No.4 Part – I (Project) / Volume – II (TS) (Page 17) The bidder is required to establish communication.
27	220 kV Side: Double bus Arrangement with 2 Nos. Incoming/ Outgoing Feeder Bays, 2 Nos. Transformer bays, 1 No. Bus-Coupler, 1 No. Outgoing/ Incoming bay (Future).	Cl no: 2.11 i). b.(i) a / Part – I (Project) / Volume – II (TS) (Page 8)	We understand that supply of CRP and SAS for future bay is part of this contract. Request you to confirm the same.	Pl. quote as per the quantity of BoQ.
28	132 kV Side (Existing Main, Aux. and Transfer Bus) 2 Nos. of Transformer Incomer Bays.	Cl no: 2.11 i).b.(i) b / Part – I (Project) / Volume – II (TS) (Page 8)	We request you to provide the Make and type of 132kV bus bar protection i.e. incase existing bus bar protection is already available.	There is no bus bar protection system available in 132 kV switchyard.
29	Lines: Incoming/ Outgoing Lines to the Substation and their approximate line	Cl no: 2.11 ii). Sl. No. 3.(iii) / Part – I (Project) / Volume – II	We understand that protection is required in Heerapura – Nala Power House line.  We request you to clarify whether the required protection is cable differential protection or distance protection ?	Pl. refer clause 9.5 S-V C&R-SAS for transmission line protection.

	<p>lengths are given below:  220 kV Lines: 220 kV Heerapura-NPH: Approx. 9.5 Km (Conventional) [FUTURE Conversion of existing 132 kV Line is Proposed under other packages] 220 kV Heerapura- NPH: Approx. 10.0 Km (Cable Circuit).</p>	(TS) (Page 10)		
30	<p>RTCC Panels :  Existing RTCC Panels are to be shifted and Installed in new Control Room with Retrofitting for IEC-61850 based TCMS (Transformer Control and Monitoring System). IEC-61850 Integration on Substation LAN shall be done for transfer of data.</p>	<p>Cl no: 11.0 iii)  Sl. No. 3.(iii) / Part – I (Project) / Volume – II (TS) (Page 17)</p>	<p>We request you to provide the existing TCMS Make and Type at Nala Power House Substation and Heerapura Substation.</p>	<p>At 400 kV Heerapura Sub station, TCMS is not required.PI. refer reply at S.No. 4 above . Quote the make/model meeting the specification requirements.</p>

31	Schedule of Prices	Sl. No. SVAB / Schedule – B1 (Schedule of Prices)	<p>We understand that as per BOQ Separate control panel and relay panel required for all the bays.</p> <p>Since automated substation all controls through SCADA.</p> <p>Hence we request you to clarify the requirement of control panels as required.</p>	Pl. read Annexure V2-P3-S-VA-1 for panel configuration with BoQ in schedule-B1.
32	Schedule of Prices	Sl. No. SVAB / Schedule – B1 (Schedule of Prices) & SLD – Nala Power house	<p>We understand that the No. of 220kV Feeder bay is 3 including future bay (as per the SLD), but in BOQ the No. of quantity given is 4 Nos.</p> <p>Request you to clarify the same.</p>	Pl. refer to reply at S.No.5
33	Schedule of Prices	Sl. No. SVAB / Schedule – B1 (Schedule of Prices) & SLD – Nala Power house	<p>We understand that the No. of 33kV bays are 17 Nos. (as per the SLD) ,</p> <p>However if we consider that two bays are being accommodating in one panel then the quantity of panel should be 9 Nos. but BOQ quantity is 7 Nos.</p> <p>Request you to clarify the same.</p>	Pl. refer to the reply at S.No. 7 above.
34	Schedule of Prices	Sl. No. SVAB / Schedule – B1 (Schedule of Prices) & SLD – Nala Power house	<p>We understand that the No. of 11kV bays are 17 Nos. (as per the given SLD).</p> <p>However if we consider that two bays are accommodating in one panel then the quantity of panel should be 9 Nos. but BOQ quantity is 8 Nos.</p> <p>Request you to clarify the same.</p>	Pl. refer to the reply at S.No. 8 above.
35	220 KV Cable	General	<p>We understand that 220 KV cable shall be laid directly under ground and no separate trench is required for the same.</p> <p>Please confirm our understanding.</p>	Confirmed. Laying shall be as per standard practices subject to approval of Nigam.

36	Filling of earth	Schedule B3	As per schedule B3 for Civil work it is observed that no earth filling work is in bidder's scope. Pl. clarify. In case any earth filling/cutting work is to be performed by Bidder, please furnish us with the quantity of the same.	Pl. refer to the reply at S.No. 19 above.
37	Layout Drawing	General	Layout drawing furnished with enquiry is not legible. Also, does not indicate the necessary dimensions. We request you to provide readable copy of Layout plan along with dimension indications.	We have already given AutoCAD drawings with bid document which can be enlarged and printed
38	Quantity of Material	Schedule-B1, B2, B3	We understand that quantity indicated in Schedule B-1 to B3 are applicable for both NPH and Heerapura Substation.	Confirmed.
39	Male part of 220 KV Cable termination for Incoming lines	General	Please confirm that Male part of Termination kit for Incoming line shall be in scope of cable supplier.	Confirmed.