

**CORRIGENDUM - 2 DATED 14.01.2014 (PART 01 OF 04)**

SI	Section	Project	Scope	Clause	Bidder's Query/Remarks on Specs	BHEL Response
1	ITB	General	General	Page 3 Of 4	On award of contract if bidder seeks dilution of the specs.. this should not be allowed as it can change the L1 status & should call for retendering	Already clarified in Corrigendum No.1 dtd 06.01.2014
2	PQR	General	General	3.0	Pls. clarify, how does BHEL differentiate improved version v/s new products	Evaluation will be based on the declaration by the bidder with proper supporting documents as called in PQR. If BHEL do not receive satisfactory explanation / documents regarding improved version of the system, then the offer will be subjected to technical rejection. One of the requirements of acceptance shall be the improved version shall meet all the tehcnical requirements of specification.
3	PQR	General	General	3.4	Can vendors offer outsourced product with their branding? In this case what PQR criteria will be applicable?	Vendor can Offer components sourced through TSS & VMS OEM. PQR of manufactures, from whom components are outsourced are also acceptable. This point is already clarified in Corrigendum No.01 of point 08.
4	PQR	General	General	4.0	What if a vendor offers items like sensors or modules from different OEM's/Make for the Main TSS/VMS/A&D system? in that case who will have the single point responsibility for exeution?	BHEL will accept offers from bidders with a single point responsibility for complete design, supply & execution of the TSS & VMS system meeting the overall PQR requirements.
5	PQR	General	General	AA	Can vendors offer different models of TSS/VMS/A&D system within same project	Offers will be evaluated after opening of technical bids and as per the project specific technical specification & meeting the PQR requirements.
6	PQR	General	General	AA	Can vendors offer different models of TSS/VMS/A&D for different project	Offers will be evaluated after opening of technical bids and as per the project specific technical specification & meeting the PQR requirements.
7	PQR	General	General	AA & BB	Does the PQR criteria defined in this section superseed any project specific PQR	Yes. PQR defined in this section supercedes project specific PQR. Pl. refer the Corrigendum 01 dt. 07/01/2014.
8	SCC	General	General	2.0	Location & benefits applicable not attached	Pl refer corrigendum No. 1 dtd 06.01.2014 page 7 of 7
9	SCC	General	General	3.0	Last date of any pre bid query should be mentioned, also atleast 2 weeks time should be allowed to bidders after last corrigendum is uploded on BHEL website	Pl refer corrigendum No. 1 dtd 06.01.2014.
10	SCC	General	General	5.0	If a specific vendor is not approved for 1 or more projects by the end user then L1 status without those project'(s) can change hence the entire tender should be retendered alternatively price bid should be opened only after securing approval from end user for all technically approved bidders	RFQ conditions will not be changed.

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11	SCC	General	General	6.0	Will bid be rejected if unit prices are not quoted by vendors?	Pl refer corrigendum No. 1 dtd 06.01.2014.
12	SCC	General	General	7.0	No price impact should be allowed if vendor quotes qty less or more than required as per RFQ	Pl refer corrigendum No. 1 dtd 06.01.2014.
13	SCC	General	General	15.0	Pls confirm if PBG should be furnished by OEM/Foreign Principle supplier only. If PBG is not furnished as per this will the offer be rejected or will there be any other action as this will be after award of the PO/Contract.	Pl refer corrigendum No. 1 dtd 06.01.2014.
14	C1	Bellary	VMS	1.4	Sensor type, Sensitivity, Tolerance, Freq. range & cable length is not specified, BHEL to specify	Bidders to offer suitable sensor type, tolerance, frequency range, considering the machine data of specs.. Sensor Sensitivity of 5% is acceptable. Sensor cable length shall be about 8 meters.
15	C1	Bellary	VMS	1.7	Double doors for Junction box? This is not standard for the size of JB reqd for VMS	Single Door Junction boxes are acceptable.
16	C1	Bellary	A&D	2.8.6	As the VMS panel in CER shall be placed close to each other, can vendors offer common redundant switches with adequate no. of ports for this link	Refer Corrigendum 1 dtd 7-1-14 / Cl A-12
17	C2	Bokaro	TSS	1.9.11	Panel size is 800x800x2300, door swing of max 375 mm i.e. double door required, IP42, this is different from VMS, which is correct?	Refer Corrigendum 1 dtd 7-1-14 / Cl A-14
18	C2	Bokaro	VMS	2.1 (iii)	sensors with low noise cables of 10 meter length is required for VMS. Pls clarify if the description also applicable for phase ref. sensors of VMS	For all type of Sensors, cable length shall be about 8 meters.Other details as per RFQ specs..
19	C2	Bokaro	VMS	2.1 (iv)	VMS Sensor parameters such as Sensitivity, frequency range not specified, pls include this in specs or clarify	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data of specs..
20	C2	Bokaro	VMS	2.1 (vi)	Specify machine criticality & measurement I/O's for which 2/3 or 1/2 logics are required Pls clarify if power converters/modules external to the system Rack are acceptable (i.e. Power supply module are not within the rack)	Machines mentioned in specs are critical and offer shall meet RFQ specs requirement.
21	C2	Bokaro	VMS	2.1 (vii)	Pls clarify front face of the monitor should have display & set point adjustment facility for setting alarm & trip levels, as per this each monitor should have front port for set point adjustment	Offer shall be as per RFQ specs
22	C2	Bokaro	VMS	2.2	Panel size is 800x800x2415, IP32, no double door required, this is different from TSS, which is correct?	Refer Corrigendum 1 dtd 7-1-14 / Cl A-14

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23	C4	Farakka	General	BB	PQR specified in section BB, does it overrule the PQR in main RFQ	Refer Corrigendum 1 dtd 7-1-14 / CI A-3
24	C4	Farakka	TSS	1.9.3	Supply for TSS is 240Vac where as for VMS is 24Vdc, which is correct?	Offer shall be as per RFQ specs
25	C4	Farakka	TSS	3.14	Zero Speed measurement is mentioned in specs but not listed in the table of measurements in Table-2, is this measurement required?	This measurement not applicable and hence this clause in NULL & VOID
26	C4	Farakka	VMS	2.4	VMS Sensor Sensitivity, Tolerance, Freq. range & cable length is not specified	Sensor Sensitivity of 5% is acceptable.. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.
27	C4	Farakka	VMS	2.6	Supply for TSS is 240Vac where as for VMS is 24Vdc, which is correct?	Offer shall be as per RFQ specs
28	C4	Farakka	A&D	4.6.3	All communication "cables" for analysis system should be redundant. Is Redundant ethernet port on CPU/Monitoring system required for analysis?	Redundant ethernet switch and redundant cable shall be offered.
29	C4	Farakka	General	8.0	QAP to be approved by SCCL, pls clarify who is SCCL?	QAP is approved by M/s NTPC
30	C5	Lalitpur	VMS	1.1 (iii)	sensors with low noise cables of 10 meter length is required for VMS. Pls clarify if the description also applicable for phase ref. sensors for VMS	For all type of Sensors, cable length shall be about 8 meters.Other details as per RFQ specs..
31	C5	Lalitpur	VMS	1.1 (iv)	Sensor Sensitivity, Tolerance, Freq. range is not specified, pls include the same or clarify requirement	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.
32	C5	Lalitpur	VMS	1.1 (vii)	Pls clarify front face of the monitor should have display & set point adjustment facility for setting alarm & trip levels, as per this each monitor should have front port for set point adjustment	Offer shall be as per RFQ specs
33	C6	Muzaffarpur	VMS	1.3	VMS Sensor parameters such as Sensitivity, frequency range not specified, pls include this in specs or clarify	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.
34	C7	Sagardighi	VMS	2.1 (iii)	sensors with low noise cables of 10 meter length is required for VMS. Pls clarify if the description also applicable for phase ref. sensors for VMS	Sensor cable length shall be about 8 meters. Other details as per Specs.
35	C7	Sagardighi	VMS	2.1 (iv)	Sensor Sensitivity, Freq. range is not specified	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.

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36	C7	Sagardighi	VMS	2.1 (vii)	Pls clarify front face of the monitor should have display & set point adjustment facility for setting alarm & trip levels, as per this each monitor should have front port for set point adjustment	Offer shall be as per RFQ specs
37	C8	Singareni	VMS	2.4	Sensor type, Sensitivity, Tolerance, Freq. range & cable length is not specified	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.
38	C9	Vindhyachal	A&D	1.9.13	Cable distance from TSS to A&D computer is 250 meter which is contradicting to Clause 3.6.2/3.6.3 where is 75 Mtrs	Cable distance between TSS and A&D computer is 250 meters ( RFQ specs cl 1.9.13 )
39	C10	Yeramarus	VMS	1.4	Sensor type, Sensitivity, Tolerance, Freq. range & cable length is not specified, BHEL to specify	Sensor Sensitivity of 5% is acceptable. Bidders can offer suitable sensor type, tolerance, frequency range, considering the machine data.
40	C10	Yeramarus	VMS	1.6 (a)	Pls clarify front face of the monitor should have display & set point adjustment facility for setting alarm & trip levels, as per this each monitor should have front port for set point adjustment	Offer shall be as per RFQ specs
41	C10	Yeramarus	VMS	1.10	List of points indicates 380 for 2 units, however as per specs only 1 probe per bearing in Y Direction, hence total qty of measurement should be 190 for 2 units	Refer Corrigendum 1 dtd 7-1-14 / Cl A-13
42					Whether cable from TSI JB to Panel required to be considered in vendor scope for BFPDT TSI in Farakka Project. If yes, please specify the distance from field JB to control room.	Cable is in BHEL's scope.
43					In several projects the cable distance from TSS/VMS Panel to Analysis Computer is mentioned as less than 100 meters but FO cables are asked for in the specs. Please note that as per standard Ethernet cable specs, up to 100 meters can be covered with standard Cat5 cables. This should be left to the vendors to decide the cable type based on the offered system requirement.	Vendor to decide the type of cable & accessories required between Analysis server and TSS/VMS panel.

**CORRIGENDUM - 2 DATED 14.01.2014 (PART 02 OF 04)**

S.No.	Document No.	Chapter	Page	Description of clarification sought	BHEL reply
1	Corrigendum 01 dated 7.01.14	Enclosure to Special Conditions of Contract (RFQ No.: RED0000025)	7 of 7	For Mega Projects: Sagardighi (2 x 500 MW) and Lalitpur (3 x 660MW), ED is mentioned as NIL. We understand that BHEL will not pay any ED for these projects to the supplier. As such, would BHEL provide the Project Authority Certificate to its successful bidder so as to pass the benefit to the supplier and its sub suppliers.	Yes, BHEL will provide necessary documents to avail Excise duty exemption.
2	Corrigendum 01 dated 7.01.14	Enclosure to Special Conditions of Contract (RFQ No.: RED0000025)	7 of 7	It is mentioned that for SAGARDIGHI, BELLARY, YERMARUS and LALITPUR projects Duties/ taxes are reimbursable by customer. Kindly confirm whether these taxes/duties shall be reimbursed to the Supplier.	Excise duty, CST/VAT , Freight, etc. quoted by Bidder will be considered for calculating Total cost . Wherever Customer reimbursements are mentioned, same will be subtracted from the "Total cost" to arrive at "Total cost to BHEL".
3	RFQ No. RED0000025 part 1 of 3	SCC Clause 13	3 of 5	Is high sea sale allowed for the project. If so, what would be the inspection provision. The total system supply contains both indigenous and imported items. In case of High Sea sales, what would be the evaluation criteria for "Total Cost to BHEL"	Yes, High sea sales is allowed. For imported portion, No inspection is applicable. Clearance will be based on verification of Test certificates & acceptance. For imported portion, only Customs duty and Freight from Airport/seaport to respective site will be calculated for arriving at "Total cost to BHEL". Indigenous and services already given in Instructions to Bidders.
4	RFQ No. RED0000025 part 2 of 3	Purchase Specifications of VMS system for Bokaro	11 of 22	Please confirm whether a time synchronization system is already existing. If so, please confirm the synchronization protocol and port availability.	IRIG-B time synchronization will be provided by BHEL. Vendor to provide suitable interface hardware in PC / Server offered.
5	RFQ No. RED0000025	Purchase Specifications of VMS for all plants		For auxiliaries (VMS requirement) please provide the drawings for a better understanding of the JB location and cable length evaluation.	JB will be about 8 meters from each bearing. Sensor cable will be terminated in this JB
6	RFQ No. RED0000025	Purchase Specifications of TSS for all plants		For TSS, it is mentioned that the signals of overall expansion and rotor expansion to be used to compute the differential expansion of HPT and IPT . For this computation separate sensors are required for HPT and IPT. Please confirm whether these additional sensors are already installed or need to be considered in our scope of supply.	Differential expansion will be computed using overall expansion and rotor expansion signals only. There is no separate sensor required for differential expansion of HPT and IPT measurements.
7	RFQ No. RED0000025 part 3 of 3	Purchase Specifications of VMS for For RPCL Yermarus TPS List of Vibration Sensor/Machine Data	4 of 11	Kindly confirm whether a key phasor measurement is required for the assets mentioned in the List of Vibration Sensors/ Machine Data .	Key phasor measurement is required for analysis & diagnostic system. Analysis & diagnostic applicable for main Turbine, Generator & BFPDT system. Hence, key phasor measurement not applicable for VMS system.

**CORRIGENDUM - 2 DATED 14.01.2014 (PART 03 OF 04)**

<b>S.N.</b>	<b>Biodder Queries</b>	<b>M/s BHEL Reply</b>
1	SRF Form is required to be filled by vendors who are already Registered with BHEL?	No. If works/facility is shifted or any other information is changed, SRF has to be given once again.
2	SCC Clause 11 for Erection & commissioning quoting as Lumpsum basis - We will mention no. of days and visits required for TSS, VMS & Analysis & diagnosis software to complete commissioning activity and request M/s BHEL to look into the same based on past experience at sites as indicated below. Vendor engineers visited at sites irrespective of number of days & visits since we agreed to complete E&C.	Already clarified in Corrigendum 1 dtd 7-1-14 / Pt no B-5
3	Clause Ref : CE/409-416/TSSVMS/PQR 3.5.1 : BHEL Clarified that - Even if one item is offered as improved version, all spares as per clause 3.5.1 shall be offered for each project separately. E.g. bidder is quoting improved version of monitoring system only, still bidder needs to offer sensors & Monitors both as additional?	Refer Corrigendum 1 dtd 7-1-14 / Pt no A-6
4	How BHEL is considering vendors in price bid who are not approved by end user ? It is package price hence all orders needs to be considered to the same vendors and should not be cancelled or it should be changed to be L1 in each project and orders will be awarded accordingly.	BHEL will consider as per RFQ conditions.
5	Unit Price of each project should be bidders decision being a clubbed tender for many projects.	Not acceptable.
6	Penalty clause for Delivery - We accept penalty for delayed delivery but if BHEL fails to take delivery, BHEL needs to pay 2% per week to vendor.	Not acceptable.
7	PBG extension - PBG Validity will be extended only if delay due to FM side and not if delays by customer.	Not acceptable.
	<b>PROJECT RELATED</b>	
1	<b>BB. Technical requirements : TSS : Absolute bearing vibration measurement</b> - The Sensor integral cable and the extension cable shall be Teflon insulated and to meet the high operating temperature > 205 deg C requirement of the respective sensor. whereas as per API 670 std. 120 deg for the same is acceptable. As per our experience, we have never faced problem due to high op. temperature while installations and requesting BHEL to clarify the need for 205 deg temp.	Offer shall be as per RFQ specification only. No deviation acceptable.
2	NTPC FARAKKA Relative shaft measurement for brg 5&6 is not mentioned. BHEL to clarify offering of sensors & mounting arrangement for brg 5&6.	Offer shall be as per RFQ specification
3	NTPC FARAKKA : Cl. 1.9.3 : Electronic Racks : 240VAC dual redundant power supply feeders provided by BHEL whereas, VMS Clause no. 2.6 asks VMS system should work on 24VDC feeders. BHEL To clarify power supply feeders for TSS & VMS.	Offer shall be as per RFQ specification
4	NTPC FARAKKA : VMS CL. 2.10 : BHEL To clarify location of racks CWP 5 no.s. CWP will be kept in CWP pump house or in MCR?	Racks and its Panel for CWPs will be located in CWP Pump house.
5	NTPC Sagardighi : Cl. 1.9.3 : Electronic Racks : 24DC dual redundant power supply feeders provided by BHEL whereas, VMS Clause do not say anything about feeders. BHEL To clarify power supply feeders for TSS & VMS.	For TSS : As per RFQ specs. For VMS : Power supply feeders shall be 240 V AC UPS
6	RPCL Yermarus : Cl. No. 1.5 : BHEL To clarify requirement of workstation hardware a/w licensed software for VMS of Unit 1, 2 & CWP as analysis & diagnostic software and hardware is not asked to quote for VMS.	Cl 1.5 may be treated NULL and VOID. However, required Configuration tool as per specs. ( cl 1.9 ) required to be offered.
7	For some of the projects, 15" display is not asked. Do we need to still consider display by default in each project?	Offer shall be as per RFQ specification
8	Do we need to consider redundant communcial to DCS from TSS & VMS Rack? Do we also need to provide cabling for the same?	Offer shall be as per RFQ specification

**CORRIGENDUM - 2 DATED 14.01.2014 (PART 04 OF 04)**

SI No	Bidder Queries	M/s. BHEL reply
1	It is not clear whether you wish to diagnostics on auxiliary machinery or not – please can you check this. I have assumed so far that diagnostics is required on the TG and the BFP–DT of each plant only, and no diagnostics is required on any other auxiliary machinery. If diagnostics were to be required on all auxiliary machinery then the cost and time for configuration doubles.	For diagnostic scope , project specific technical requirement to be referred
2	Standard procedure is machine protection to be installed on all locations of TG + auxiliary machinery where it is not already installed, TG with diagnostics, DCS .Recording the overall of all measurements locations	For diagnostic & Sensor scope , project specific technical requirement to be referred.
3	Calibration equipment for each unit is requested – is this correct?	One number common for TSS & VMS shall be supplied per project as mentioned in technical requirement.
4	It seems they have little or no sensors already, they seem to need sensors and machine protection almost everywhere – is this correct?	For Sensor scope project specific technical requirement to be referred & complied.
5	What is meant by the FFT analyzer mentioned e.g. on Page 84 item 2.5 – is this FFT for the Main-TG and BFP only, or is it for the auxiliary equipment also? What if the FFT is integral to the diagnostics unit, but this is only connected to the TG? Under my recommendation in (2) above, a portable FFT unit for the auxiliaries would be sensible addition – is this what mean ?	FFT analysis shall be continuous and Portable FFT analysier is not acceptable. On page 84 item 2.0 indicated that analysis & diagnostics applicable for Main Turbine & BFPDT only. For detailed scope , technical requirement for each project to be referred.
6	The diagnostics unit is described as ‘...evaluate the data... checking for malfunctions... guidance for predictive maintenance” and most critical of all “...shall not require the intervention of a vibration expert”. Such a reliable automated diagnostics does not exist in our experience, and we cannot recommend one. Is this obligatory and necessary? Our recommendation is for alarms to be followed up by analysis of the data on the diagnostics unit	Vendor has to comply diagnostic requirement as mentioned in project specific technical requirement .
7	The bid deadline is very tight – only 1 month from the issue of the RFQ – is this accurate? The bid requires a lot of documentation to be prepared and the submission date should be extended further 25 days.	Tender due date cannot be extended.
8	Within 2 weeks of the P.O you wanted wiring diagrams for all the units which is very less, they required minimum 40 days time to do so – please check?	No change in RFQ terms will be allowed.