



Ref: PE/PG/EN1/E-4837/2015/01 /CORRIGENDUM/04

Date: 07/07/2015

DUE DATE
09/07/2015
02:00PM(IST)

Subject: Technical Clarifications for tender of Generator circuit breaker of 2X660 MW ENNORE SEZ

Our Ref:

- (i) PE/PG/EN1/E-4837/2015/CORRIGENDUM/01 dated 18.05.2015
- (ii) PE/PG/EN1/E-4837/2015/CORRIGENDUM/02 dated 12.06.2015
- (iii) PE/PG/EN1/E-4837/2015/01 dated 15.06.2015

Please find enclosed technical clarification with reference to subject tender Enquiry no PE/PG/EN1/E-4837/2015 dated 13.05.2015.

Further bidders note that annexure-A is attached that shall be considered by the bidders.

Please ensure submission of offer before the due date & time.

Akash Verma
07/07/15

Thanking You

With regards
For & on behalf of BHEL
Akash Verma
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कृपया प्रेषित करे :	Please reply to :	फ़ोन Phone No:
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पीपीआई भवन	PPEI Building,	
प्लॉट नं २५, सेक्टर १६ ए	Plot No.25, Sector 16A,	
नोएडा - २०१ ३०१ उ प्र	Noida-201301 (U.P.)	
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पंजीकृत कार्यालय	Registered Office :
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S.No.	Bidder's query	BHEL reply	Bidder's query	BHEL reply
1	SL No.2, Item No. 510-11006-A, O&M SPARES (FOR 3 YEARS OPERATION). We will submit the List against recommended spares (for 3 year operation). However, Please confirm that a) The list will be agreeable to BHEL/PEM. b) For commercial evaluation purposes the same will be rationalized in line with fare competition practices.	Bidder to comply to the specification requirements.	Please find below the list of O&M Spares as per bidder standard. And confirm. <list omitted>	Kindly refer Annexure-A (attached with the reply) for the list of recommended (O&M) spares.
2	SL No. 3, Item No. 510-11007-A, We do not envisage any spares for Testing purposes. However, BHEL/PEM can propose a list.	Please confirm that spares required (if any) during the commissioning tests shall be supplied by the bidder. For tests to be conducted at site, bidder to arrange testing equipment as per clause 8.00.00 "Supervision of Erection, testing and commissioning" of the technical specification.	As confirmed earlier we do not envisage any spares for Testing purposes. All the necessary arrangements with required spares shall be arranged by BHEL at site as our scope is limited to Supervision only. For commissioning of the GCB following 2 equipment's shall be brought by supervisor if not available at site. Kindly confirm. a) 1 Drop Voltage desk, 100Amps with accuracy of 1 micro ohm b) 1 event recorder, 12 channels minimum with accuracy of 1ms For measuring operating times	Kindly refer Annexure-A (attached with the reply) for the list of testing spares.
3	SL No.5, Item No. 510-11011-A, We have our own standard list which will be required for erection and maintenance. However, Tools for Miscellaneous items for field erection, Testing, Pre commissioning and Performance Testing are not in the scope of bidder. Kindly confirm.	Noted. However, bidder to confirm that the items considered by the bidder shall take care of all the erection and commissioning requirements related to GCB at site. Also, bidder to arrange testing equipment as per clause 8.00.00 "Supervision of Erection, testing and commissioning" of the technical specification.	As informed earlier bidder scope is limited to Supervision only. Any other item beyond the below mentioned items shall not be in the scope of bidder. For commissioning of the GCB following 2 equipment's shall be brought by supervisor if not available at site. Kindly confirm. a) 1 Drop Voltage desk, 100Amps with accuracy of 1 micro ohm b) 1 event recorder, 12 channels minimum with accuracy of 1ms For measuring contacts resistance of main circuit For measuring operating times	Noted. However, refer Annexure-A (attached with the reply) for the list of testing spares.
4	Clause No.2.01.00, Our Surge Arrestors are without operation counter. The same has been accepted by BHEL/TANGEDCO in their earlier projects with GCB. Kindly confirm	Bidder to comply to the specification requirements.	As mentioned above our surge arrestor will be without operation counter.	noted.
5	Clause No.2.01.00, Kindly clarify what type of miscellaneous items for field erection, Testing, Pre commissioning and performance testing is required.	Special tools & tackles for erection and commissioning shall be included as per the specification. For testing at site, Bidder to arrange testing equipment as per clause 8.00.00 "Supervision of Erection, testing and commissioning" of the technical specification.	Please find below the list of special/mandatory tools which will be supplied along with GCB. Apart from these all other items shall be arranged by BHEL. Since our scope is limited to Supervision of Erection and commissioning only. <list omitted>	Kindly refer Annexure-A (attached with the reply) for the list.
6	Clause No. 2.01.00, Kindly clarify Temporary elements required for field erection and commissioning.	Temporary elements means any additional elements required only during the erection, commissioning and testing at site on returnable basis.	Please see the items list which shall be brought on returnable basis to site for commissioning. a) 1 Drop Voltage Desk, 100Amps with accuracy of 1 micro ohm, For measuring contacts resistance of main circuit b) 1 Event Recorder, 12 channels minimum with accuracy of 1ms, For measuring operating times	noted.
7	Clause No.3.00.08, An active mimic diagram are now days obsolete. Hence cannot be provided. However a simple diagram will be shown in the LV cubicle for reference. The same has been accepted by BHEL/TANGEDCO in their earlier projects with GCB. Kindly Confirm.	Bidder to comply to the specification requirements.	As confirmed above active mimic diagram is now days obsolete. Hence cannot be provided. Kindly confirm.	In absence of Electrically operated semaphore indicators, bidder shall provide lamp indication in mimic diagram for position of GCB, Isolator & Earth switches.
8	Clause No.3.00.13, Earthing pads cannot be provided as per standard practice. However provisions shall be provided. The same has been accepted by BHEL/TANGEDCO in their earlier projects with GCB. Kindly Confirm.	Bidder to comply to the specification requirements.	bidder will provide only provision for connecting the earthing pads but earthing pads cannot be provided in line with earlier executed projects. Kindly confirm.	Provision for termination of earthing flats (BHEL scope) shall be provided in the GCB.
9	As per General technical particulars LA is not required but as per SLD it is required. Kindly clarify.	Surge arrestors shall be provided in line with the SLD as per the specification requirement.	Noted. However Surge Arrestors shall be provided without counters.	noted.

ANNEXURE-A

I) LIST OF O & M SPARES (3 YEARS OF OPERATION)

	item description	unit	qty	remarks
1	SF6 density meter/ leakage detector	no.	1	
2	Circuit breaker closing coil	no.	1	
3	Circuit breaker tripping coil	no.	2	
4	Isolating switch, selector switch, breaker control switch, position indicators, contactor/relays, push button, timer	%	5	5% of the total number, minimum 1 no. of each type & rating
5	Power and control fuses/circuit breakers of different rating	%	5	5% of the total quantity, minimum 1 no. of each type & rating
6	Indicating lamp	%	10	10% of the total quantity, minimum 1 no. of each color & type
7	Auxiliary switch assembly	set	1	1 set each for circuit breaker and switches
8	Motor kit (as applicable)	no.	1	
9	Hydraulic oil for operating mechanism (as applicable)	can	2	
10	Carbon cleaning brush	set	2	

II) STARTUP AND COMMISSIONING SPARES (minimum requirement)

	item description	unit	qty	remarks
1	Lifting beam, shackles and straps	set	1	
2	consumables like lubrication grease etc.	set	1	
3	emergency operating lever	no.	1	
4	hand cranking device	no.	1	
5	foundation bolts	set	1	

NOTE Other spares, as applicable, as per manufacturer's standard shall be supplied for successful erection, commissioning and testing of GCB at site.

III) SPARES FOR TESTING

	item description	unit	qty	remarks
1	contact resistance measurement equipment	set	1	
2	event recorder for measuring operating time	set	1	

NOTE 1. Spares for testing shall be on free returnable basis.
2. any other instrument required for site testing of the GCB as per clause 4.03.00 (tests after delivery/ site tests) on free returnable basis shall be provided