



Ref No. : PE/PG/APP/E-5434/2016/CORRIGENDA/01

Date: 01.02.2017

CORRIGENDA / ADDENDUM-01

**SUBJECT: 1 X 800 MW APGENCO VIJAYWADA, UNIT 8 & 1X 800 MW APPDCL KRISHNAPATTANAM STAGE II.  
TENDER ENQUIRY FOR GENERATOR CIRCUIT BREAKER (GCB)  
OUR REF: TENDER ENQUIRY NO: PE/PG/APP/E-5434/2016 Dated: 11.01.2017**

DUE DATE
06.02.2017
BY 02.00PM

Replies to Bidders' pre- queries have been compiled in **Annexure - I** and are hereby uploaded on BHEL websites.

Encl:-

- i) Replies to Pre bid Queries of bidders (Annexure – I) for both projects.

Thanking You,

With Regards,

For & on behalf of BHEL

*Ashutosh Sharma*  
ASHUTOSH SHARMA / ASHUTOSH SHARMA  
Sr Engineer (PG-I) / Gr Engineer (PG-I)  
Power Project Engineering Institute Building  
HRD & ESI Complex Plot No. 25, Sector -16 A,  
BHEL-PEM, Noida-201301 (U.P.)  
Tel No. 0120-4213510, 9953038740

Please reply to:

**Ashutosh Sharma, Sr. Engineer/ PG-I-I**  
Power Project Engineering Institute Building  
HRD & ESI Complex Plot No. 25, Sector -16 A,  
BHEL-PEM, Noida-201301 (U.P.)  
Tel No.0120-4213510, 9953038740

**PROJECT:- 1X 800 MW APPDCL KRISHNAPATTANAM STAGE II.**  
**PACAKGE:-GENERATOR CIRCUIT BREAKER (GCB)**  
**ENQUIRY NO.PE/PG/APP/E-5434/2016 Dated: 11.01.2017**  
**ANNEXURE - I REPLIES TO PRE BID QUERIES**

Sno. Coloumn 1	BIDDER'S QUERY/DEVIATION Coloumn 2	TO BE FILLED IN BY BHEL Coloumn 3
1	The quoted breaker can have: 10NC + 14 NO Or 8NC + 12 NO Auxiliary contacts Disconnecter and earthing switch can have: 2NC+ 4 NO contacts. Increasing of the offered number of contacts can be done by multiplication of contacts in control circuit.	Bidder to comply the specification( Using suitable contact multiplications relays, if required).
2	VT 1 & VT2 with 0.2/3P configuration of VT with single primary and single secondary burden can be maximum 45 VA	Each VT1 & VT2 shall be provided with two secondary windings with 0.2/3P configuration. BHEL agreed that for winding 1 : measurement winding with 0.2 accuracy class, the VA burden will be 45VA. Bidder to provide secondary winding 2 of the VT with 3P class as per specification.
3	Primary fuse is not applicable - Due to Phase isolated connection between Generator and step up transformer Polyphase fault cannot occur in this connection, same here with single bushing voltage transformer is mounted inside the phase isolated enclosure of GCB system ,please find the write up for the same.	BHEL Noted to the writeup provided by bidder. However the same shall be finalized during detailed engineering without any price implication.
4	Maximum Allowable temperature - Maximum temperature has been considered as per standard that is 105/80°C	BHEL agreed. However bidder to confirm to point No. 1.19 of sheet 12 of 45
5	SF6 Gas - Factory test report shall be submitted, as applicable.	Factory test reports supplied by SF6 gas supplier shall be submitted.
6	Flexible connection - IPB flexible connection shall not be in bidder's scope , however suitable provision shall be made to connect with IPBD through flexible connection.	BHEL agreed.
7	Indication as minimum - We have Alarm Signal of SF 6 – Low density & SF6 Blocking Pole discrepancy is not applicable Operating system failure is indicated as Long time pump running	Bidder to provide all alarms indications as per the specification except Alarm for SF6 density very low for which blocking signal will be provided. Agreed for Pole discrepancy since the GCB is a gang operated breaker.
8	Interlocking - We have electrical and mechanical interlocking available in the GCB however as a clarification mechanical interlocking represent by key interlocking system.	BHEL Noted.
9	Foundation plan & loading - bidder will submit the GA drawing only where dynamic forces are defined.	BHEL Noted.
10	Operation counter per pole - Operation counter is for all three pole together as it is a gang operated breaker. Please clarify.	BHEL agrees to bidder's explanation that the operation counter for all three poles to be given together.
11	Device for manual slow closing	Bidder to provide as per specification.
12	Point no b & point no e is the same as our key interlocking is known as mechanical interlock.	BHEL agreed.
13	Is: ...rate shall not exceed 5% of the total enclosure volume per hour. - We offer: ...Leakage test of system enclosure at 20 mbar / < 5 min	Please provide as per specification.
14	Control signal terminals - For all functions bidder provide terminals at LCP, integration with control is not in bidder's scope BHEL needs to provide annunciation via control room.	BHEL agreed.
15	Interconnection Cables - Interconnection cable inside GCB system is only the responsibility of bidder hence outside interconnection is not under control of bidder and not applicable..	BHEL specification is very clear. Bidder to provide as per specification only.
16	Operation manual does not cover instruction on how to disassemble and repair the critical items of the breaker like chamber, drive. This has to be done by certified engineers.	Noted.
17	Training shall be arranged for six person in 2 days at our works.	Bidder is requested to follow the technical specification. The Training programme shall be finalised after the award of LOI/PO.
18	Supervision of erection & Commissioning don't need any additional equipment	Please provide as per specification/ price schedule.
19	The special tools and tackles which are required for Erection, assembly, disassembly, adjustment, and overhauling of GCB are not offered.	Please provide as per specification/ price schedule.
20	Quality plan according to the factory standard shall be offered	BHEL Noted and accepted.
21	5.01.00: Routine test as per factory standard or as per approved QAP 5.02.00: offered type test is as per IEEE C37.013 but bidder can submit a letter for conformance for meeting the new standard requirement. 5.03.00: Site test point I, III & VI is not in bidder's scope	5.01.00 Noted and accepted. 5.02.00 M/s ABB to refer to section-I which is clear. 5.03.00 Noted and accepted.

*Ashutosh Sharm*  
 Ashutosh Sharm  
 Power Sector - Project Engineering Management  
 पॉवर सेक्टर - प्रोजेक्ट इंजीनियरिंग मैनेजमेंट  
 प्लॉट नं.-25, सेक्टर-16, नोडा-201 001  
 प्लॉट नं.-25, सेक्टर-16, नोडा-201 361

**PROJECT:-1 X 800 MW APGENCO VIJAYWADA, UNIT 8**  
**PACAKGE:-GENERATOR CIRCUIT BREAKER (GCB)**  
**ENQUIRY NO.PE/PG/APP/E-5434/2016 Dated: 11.01.2017**  
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3	Primary fuse is not applicable - Due to Phase isolated connection between Generator and step up transformer Polyphase fault cannot occur in this connection, same here with single bushing voltage transformer is mounted inside the phase isolated enclosure of GCB system .please find the write up for the same.	BHEL Noted to the writeup provided by bidder. However the same shall be finalized during detailed engineering without any price implication.
4	Maximum Allowable temperature - Maximum temperature has been considered as per standard that is 105/80°C	BHEL agreed. However bidder to confirm to point No. 1.19 of sheet 12 of 45
5	1 No of SPVT cubicle of GCB	SPVT cubicle shall be in BHEL scope of supply. However VTs shall be supplied as per specification.
6	SF6 Gas - Factory test report shall be submitted, as applicable.	Factory test reports supplied by SF6 gas supplier shall be submitted.
7	Flexible connection - IPB flexible connection shall not be in bidder's scope , however suitable provision shall be made to connect with IPBD through flexible connection.	Noted and accepted.
8	Indication as minimum - We have Alarm Signal of SF 6 – Low density & SF6 Blocking Pole discrepancy is not applicable Operating system failure is indicated as Long time pump running	Bidder to provide all alarms indications as per the specification except Alarm for SF6 density very low for which blocking signal will be provided. Agreed for Pole discrepancy since the GCB is a gang operated breaker.
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22	5.01.00: Routine test as per factory standard as per approved QAP 5.02.00: offered type test is as per IEEE Std 38-001 but bidder can submit a letter for conformance for meeting the new standard requirement. 5.03.00: Site test point I, iii & Vii is not in bidder's scope.	5.01.00 Noted and accepted. 5.02.00 Bidder to refer to section-I which is clear. 5.03.00 Noted and accepted.

*Ashutosh Sharma*

**Power Sector-Project Engineering Management**  
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