

Ref: BHE/PW/PUR/DHJOI-ELE/1013/Corrigendum 03

Date 17/08/2012

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To
ALL BIDDERS

1. **Sub: Corrigendum -03 for Issue of Clarifications , Chapter-VI Time Schedule and VOL-II-PRICE BID (Rate Schedule)-1013 Rev-01 dated 17/08/2012**

JOB: FOR HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, CHECKING OF CALIBRATION, TESTING, COMMISSIONING AND HANDING OVER OF CABLING, TRANSFORMERS, DAVR, SOOT BLOWER SYSTEM, VARIABLE FREQUENCY DRIVES FOR ID,FD,GR FANS, BUS DUCTS, SWITCHGEAR, LIGHTING PACKAGE, AND ASSOCIATED EQUIPMENTS FOR ELECTRICAL PACKAGE FOR 2x30MW STG+4xFr6B GTG OPAL DAHEJ PROJECT.

Tender Specification Number: BHE/PW/PUR/DHJOI-ELE/1013

Bidders to kindly take note of the following:

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AA) Clarification to the Queries of Bidder

Sl No.	Reference Clause	Bidder's query	BHEL's clarification
1	VOLUME-II Price Bid: Section-E5H	1) Payment Terms for Lighting System are not defined in TCC Chapter-VII: Terms of Payment. 2) Drawings and Data Sheets of Lighting Masts and Lighting Poles are not provided. Kindly Provide the above.	1) Payment Term is considered under I.5 in TCC chapter-VII: Terms of Payment. 2) Drawings and Data sheets are provided at site.
2	VOLUME-II Price Bid: Section-E5H:71	1) Kindly confirm that Foundation for Lighting Masts is in Customer Scope. If it is not in customer scope, please provide the Foundation GA Drawings for estimating the cost of foundation/Civil works. 2) For erecting the Mast, Mobile Crane with suitable boom will be required. Please confirm that BHEL will provide the crane.	1) Foundation of Lighting Mast is in Contractor scope. It will be made available at site 2) Mobile crane is in Vendor scope.
3	VOLUME-II Price Bid: Section-E7B.1:HT Bus Duct(SPBD)	Kindly Confirm Whether Total length of 5 sets is 76 Mtrs. or each set of SPBD is having length of 76 Mtrs.	Each set of SPBD is of 76 mtrs length.

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SI No.	Reference Clause	Bidder's query	BHEL's clarification
4	VOLUME-II Price Bid: Section-E7A: LT Bus Ducts & E7B:HT Bus Duct(SPBD)	Weight of Prefabricated Structure for mounting of Bus duct is not provided. Kindly provide the same.	Weight of Prefabricated Structure : 1)LT Bus Duct=5 Tons(approx) 2)HT Bus Duct=10Tons(approx)
5	VOLUME-II Price Bid: Section-E10B.1,E10B.2	Please provide the Weight and Dimensions of MCT Blocks and MCT Frame.	Weight of MCT Block is ranging from 80 grams to 720 grams (approx.). Weight of MCT frame is 120kgs (approx) and Dimension is 785x460mm (approx).
6	VOLUME-II Price Bid: Section-E10E	Quantity of conduit is given in Nos. Please provide the Unit length of each GI Conduit/PVC Conduit to enable us to estimate the total length to be erected. Also please provide quantity of GI Conduits and PVC Conduits separately.	Unit Length of each GI Conduit & PVC Conduit is 3mtrs (approx). Quantity of GI & PVC Conduit. 1) GI Conduit (100 & 150mm)-400 mtrs (approx.). 2) PVC Conduit (200mm)-1200mtrs (approx.).
7	VOLUME-II Price Bid: Section-E10F	Please provide the Unit length of each Hume pipe.	Unit Length of each Hume Pipe is 2.5mtrs (approx).
8	VOLUME-II Price Bid: Section-E10G (E 10G.1 – E10G.20)	Kindly provide the Unit length and Weight of each piece of Cable Duct and Accessories for Item No. E 10G.1 to E10G.20 Please provide the Drawings of Cable Duct.	Considered Unit length for cable duct as 2.5 mtrs(approx) 1)1200mmX400mm Straight run duct=100kg/mtr.(approx) 2)800mm X 300 mm Straight run duct=75kg/mtr(approx) 3) 400mm X 200mm Straight run duct =45kg/mtr(approx)
9	VOLUME-II Price Bid: Section-E2B, E10H	Kindly confirm whether HT Straight Through Jointing work is in Bidders Scope. If it is in Bidders Scope, kindly provide the quantity of ST Joints to be done.	Yes, HT Straight Through Jointing work is in Bidders Scope. Quantity of ST joints to be decide is as per site requirement.
10	TCC,Annexure-II B, Technical Details, Bill of Quantities & Drawings,Sl.No.7.2	As per the TCC, Each GR Fans consist of 2 No. of Channels and 2 Nos. of Variable Frequency Drives (VFD). But quantity mentioned in BOQ E5G.3 is 21 Sets . Kindly Clarify.	Considered Quantity mentioned in BOQ E5G.3 is 2 set instead of 21 set. Considered GD fan as GR fan.
11	TCC,Annexure-II B,Technical Details, Bill of	Kindly confirm quantity of which column (Column No.03 or Column No.04) have to considered for	Quantity of Column no.4 is considered

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SI No.	Reference Clause	Bidder's query	BHEL's clarification
	Quantities & Drawings,SI.No.7.2	erection of each set of VFD's as per BOQ E5G.1,E5G.2,E5G.3	for Erection.
12	GCC Clause No.2.12,2.15, 2.17	Generally in all Tenders, BHEL mentions in TCC, whether ORC, Extra Work Rate, PVC is applicable or not for that particular tender. We have not found any points regarding these in TCC and SCC. However it is mentioned in GCC only. Kindly confirm whether ORC, Man-hour rate for extra works and PVC are applicable for this tender as per GCC Clause No.2.12, 2.15, 2.17 respectively.	ORC, Man-hour rate for extra works and PVC to be considered as per GCC (General Condition of Contract).
13	VOLUME-II Price Bid: Section- E10H.1	Since there is very huge difference for the termination costs of 66KV Cable and 6.6KV Cable, kindly provide the quantities of 66KV and 6.6KV terminations separately	No. of HT Termination for 66 kV is 100nos.(approx) No. of HT Termination for 6.6KV is Nil.

BB) REVISED CHAPTER VI 'TIME SCHEDULE' OF VOL IA 'TCC'

Chapter VI 'Time Schedule' of VOL- IA 'TCC' has been revised and attached with this corrigendum as file titled '**Chapter VI- Time Schedule Rev 01 dated 17/08/2012'**

Revised Chapter VI 'Time Schedule' Rev 01 dated 17/08/2012 shall only be considered for further processing of tender.

CC) REVISED VOLUME-II PRICE BID (RATE SCHEDULE)

Volume-II-Price Bid has been revised and attached with corrigendum as file title '**VOL-II-PRICE BID (Rate Schedule)-1013 Rev-01 dated 17/08/2012'**.

Revised VOL-II-PRICE BID (Rate Schedule)-1013 Rev-01 dated 17/08/2012 shall only be considered for further processing of tender. Hence bidders are requested quote the price in this revised price bid only.

भारत हेवी इलेक्ट्रिकल्स लिमिटेड
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All other Terms and conditions of the Tender Specification shall remain unaltered unless expressly amended by BHEL in writing.

Bidders are requested to submit as a part of Technical Bid, a copy of this corrigendum duly countersigned by the authorized signatory and stamped with the Official seal as a token of Bidder's unqualified acceptance of this corrigendum.

This letter is hosted as file titled "Corrigendum-03 (Clarification-1013)" against NIT-12329 in BHEL web page (www.bhel.com→Tender Notifications → View Corrigendum).

Thanking you,

Yours faithfully,

AGM (Purchase) VOL-II-PRICE BID (Rate Schedule)-1013 Rev-01 dated 17/08/2012

Encl:

2. Chapter VI- Time Schedule Rev 01 dated 17/08/2012
3. VOL-II-PRICE BID (Rate Schedule)-1013 Rev-01 dated 17/08/2012

Revised Chapter VI 'Time Schedule' ISSUED WITH CORRIGENDUM 01
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6.1 TIME SCHEDULE & MOBILIZATION

6.1.1 INITIAL MOBILIZATION AND TENTATIVE SCHEDULE

Contractor shall reach site, make his site establishment and be ready to commence the work within **two weeks** from the date of fax Letter of Intent or as per directions of Construction Manager/ Project Manager of BHEL.

The contractor has to subsequently augment his resources in such a manner that the entire related works are completed to achieve the following **tentative** schedule:

FOR (UB1 AND HRSG 2&4+STG1, GT/GTG 2&4):
MAJOR MILESTONE FOR UB1 AND HRSG 2&4+STG1, GT/GTG 2&4 OF
OPAL DAHEJ

SL No.	Milestones	Date of completion Assuming DOS: 10/09/12
UB 1+STG 1		
1	Erection Start	10/09/2012
2	Drum Lifting	30/10/2012
3	Hydro Test	30/12/2012
4	Boiler Light Up (BLU)	15/01/2013
5	Safety Valve Floating	30/01/2013
6	UB Commissioning	15/02/2013
7	Condenser Erection start	01/12/2012
8	Box Up of Turbine	30/01/2013
9	Oil Flushing	28/02/2013
10	STG Barring Gear Operation	30/03/2013
11	STG Rolling & Synchronization	30/04/2013
12	Completion of Trial run	30/05/2013
13	Completion of all Facilities	15/06/2013
SL No.	Milestones	Tentative completion Schedule
HRSG 2+GT/GTG 2		
1	HRSG Erection Start	01/11/2012
2	HRSG Drum Lifting	30/12/2012
3	Hydraulic Test	28/02/2013
4	Gas In and Alkali boil Out	30/03/2013
5	Safety Valve Floating & Steam Blowing	25/04/2013
6	GT Erection Start	01/11/2012
7	Flushing	30/01/2013

**Revised Chapter VI 'Time Schedule' ISSUED WITH CORRIGENDUM 01
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8	GT Cranking	25/02/2013
9	FSNL of GT	15/03/2013
10	GT Synchronization & Open Cycle Commissioning	30/03/2013
11	Co-Gen Commissioning(GTG 2+ HRSG 2)	15/04/2013
12	Reliability Run Completion	30/04/2013
13	Completion of all Facilities	15/05/2013
HRSG 4& GT/GTG 4		
1	HRSG Erection Start	01/03/2013
2	HRSG Drum Lifting	30/05/2013
3	Hydraulic Test	25/07/2013
4	Gas In and Alkali boil Out	30/08/2013
5	Safety Valve Floating & Steam Blowing	30/09/2013
6	GT Erection Start	01/02/2013
7	Flushing	25/05/2013
8	GT Cranking	25/06/2013
9	FSNL of GT	25/07/2013
10	GT Synchronization & Open Cycle Commissioning	25/08/2013
11	Co-Gen Commissioning(GTG 2+ HRSG 2)	15/09/2013
12	Reliability Run Completion	30/09/2013
13	Completion of all Facilities	15/10/2013

FOR (UB 2, HRSG 1&3+STG 2,GT/GTG 1&3):

**MAJOR MILESTONE FOR UB 2, HRSG 1&3+STG 2,GT/GTG 1&3 OF OPAL
DAHEJ**

SL No.	Milestones	Date of completion Assuming DOS: 10/09/12
HRSG 1+GT/GTG 1		
1	HRSG Erection Start	10/09/2012
2	HRSG Drum Lifting	10/11/2012
3	Hydraulic Test	10/01/2013
4	Gas In and Alkali boil Out	15/02/2013
5	Safety Valve Floating & Steam Blowing	20/03/2013
6	GT Erection Start	10/09/2012
7	Flushing	12/12/2012
8	GT Cranking	15/01/2013
9	FSNL of GT	25/02/2013
10	GT Synchronization & Open Cycle Commissioning	15/03/2013
11	Co-Gen Commissioning(GTG 1+ HRSG 1)	25/03/2013
12	Reliability Run Completion	15/04/2013

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13	Completion of all Facilities	15/04/2013
SL No.	Milestones	Tentative completion Schedule
HRSG 3+GT/GTG 3		
1	HRSG Erection Start	25/11/2012
2	HRSG Drum Lifting	25/01/2013
3	Hydraulic Test	25/03/2013
4	Gas In and Alkali boil Out	10/05/2013
5	Safety Valve Floating & Steam Blowing	30/05/2013
6	GT Erection Start	25/11/2012
7	Flushing	25/02/2013
8	GT Cranking	25/03/2013
9	FSNL of GT	25/04/2013
10	GT Synchronization & Open Cycle Commissioning	15/05/2013
11	Co-Gen Commissioning(GTG 2+ HRSG 2)	15/06/2013
12	Reliability Run Completion	15/07/2013
13	Completion of all Facilities	15/07/2013
UB 2+STG 2		
1	Erection Start	25/12/2012
2	Drum Lifting	25/02/2013
3	Hydro Test	25/03/2013
4	Boiler Light Up (BLU)	25/04/2013
5	Safety Valve Floating	25/05/2013
6	UB Commissioning	25/07/2013
7	Condenser Erection start	25/03/2013
8	Box Up of Turbine	25/04/2013
9	Oil Flushing	25/05/2013
10	STG Barring Gear Operation	25/07/2013
11	STG Rolling & Synchronization	15/08/2013
12	Completion of Trial run	15/09/2013
13	Completion of all Facilities	15/10/2013

6.1.2

In order to meet above schedule and other intermediate targets/activities as set by BHEL Engineer In charge at site, to meet customer requirements/project schedule, contractor shall arrange all necessary resources and work force in consultation with BHEL engineer at site to under take works concurrently in all possible fronts as made available to contractor.

Revised Chapter VI 'Time Schedule' ISSUED WITH CORRIGENDUM 01
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6.1.3

Contractor shall specifically note that there is likely to be some delay in supplies of materials / release of work fronts / other reasons. Contractor shall have to work round the clock on such critical activities as a part of catch up programme to meet the project requirement to the extent possible and shall also provide required resources as part of scope of work.

6.4 Contract Period

The total contract period for completion of entire work will be **13 months** from the date of start of Erection of the first major equipment. Erection, Testing, Calibration and Commissioning of permanent equipments required for completion of system shall be completed within the time schedule given above.

The contract shall commence from the date of deployment of contractor's T&P, proper site setup and erection of first equipment. All the above three conditions are to be fulfilled (certified by BHEL engineer) for deciding the date of commencement of the contract.

The contractor shall complete all the work in the scope of this contract within the contract period

6.5 Definition of Work Completion

The contractor's scope of work under these specifications will be deemed to have been completed in all respect, only when all the activities are completed satisfactorily and so certified by BHEL site in charge. The decision of BHEL in this regard shall be final and binding on the contractor.

6.7 Schedule Compression

BHEL, owing to its commitment to their customer, may ask contractor to compress the total completion schedule by upto 10%. This will result in preponement of various milestones. For achieving the same, contractor shall plan his activities and mobilise additional resources accordingly to the satisfaction of BHEL engineer within the quoted rates.