



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 04

Ref: PSER:SCT:NKP-M1883:TCN-04

Date: 23-03-2018

Sub	Tender Change Notice (TCN) - 04.	
Job	Erection, Testing and Commissioning of Air Cooled Condenser (ACC) with Associated Auxiliary System etc. for unit # 1, 2 & 3 of 3x660 MW North Karanpura STPP, Jharkhand.	
Ref	1.0	Tender no PSER:SCT:NKP-M1883:18.
	2.0	BHEL's NIT, vide reference no. PSER:SCT:NKP-M1883:6528 Date: 20-02-2018.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:NKP-M1883:TCN-01 Date: 28-02-2018.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:NKP-M1883:TCN-02 Date: 07-03-2018.
	5.0	BHEL's TCN-03, vide reference no PSER:SCT:NKP-M1883:TCN-03 Date: 19-03-2018.
	6.0	Other References, if any.

With reference to above, following points/ documents, relevant to tender, may please be noted and complied with while submitting offer.

- 1) Pre -Bid Clarification attached vide [Annexure-A to TCN-04](#).
- 2) Revision/ Modification to Volume-IF-TCC clauses attached vide [Annexure-B to TCN-04](#).
- 3) Revised Appendix-III-Rev-01 of volume-IF-TCC attached vide [Annexure-C to TCN-04](#) superseding earlier version issued along with Volume-IF-TCC-Rev-00.
- 4) Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder shall submit no deviation certificate as per enclosed format only.
- 5) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

Sr.Engineer (SCT)

Encl: As Above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

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ANNEXURE-B TO TCN-04

Tender no PSER:SCT:NKP- M1883:18.	Erection, Testing and Commissioning of Air Cooled Condenser (ACC) with Associated Auxiliary System etc. for unit # 1, 2 & 3 of 3x660 MW North Karanpura STPP, Jharkhand.	Page 1 of 1
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VOLUME-IF-TCC

(Clause Nos 54.1 & 60.0 of Volume-IF-TCC shall be revised as below)

Clause No	Descriptions
54.1	If successful bidder fails to complete the job within the tender specified completion period (as per relevant clause of tender), BHEL shall have the right to recover as liquidated damages (LD) a sum equivalent to 0.5% of the unit wise derived contract price along with applicable GST, for delay of each week or part thereof. The liability for delay shall not in any case exceed 10% (Ten percent) of the Unit wise derived contract price. In case of LD recovery, the applicable GST shall also be recovered from vendor/Contractor/ suppliers.
60.0	INTERESTED BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE
60.1	Interest bearing recoverable advance of 5 (five) % of the contract price in stages is admissible in the following manner. Interest rate shall be the base rate of SBI (on the date of release of advance) plus 6% (compound interest shall be calculated as per monthly rest).
60.2	One and a half (1.5) % to be released on submission of following.
60.2.1	Unqualified acceptance to LOI.
60.2.2	Requisite security deposit.
60.2.3	Bank guarantee (BG) equivalent to 1.1 times the advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.
60.2.4	Detailed L-2 network submission & approval by BHEL.
60.3	One and a half (1.5) % to be released on following.
60.3.1	Submission of bank guarantee (BG) equivalent to 1.1 times the advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.
60.3.2	Deployment of 02 nos. Tower Crane on certification of the same by BHEL site.
60.4	Two (2) % to be released as per following.
60.4.1	Submission of bank guarantee (BG) equivalent to 1.1 times advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.
60.4.2	Handing over of Temporary Site office for use by BHEL/BHEL Authorized representatives on certification of the same by BHEL site.
60.5	Recovery of mobilization advance along with interest shall be made at the rate of 10% of the Gross Bill Value from 1st applicable RA bill, till the amount paid along with the interest is fully recovered by the time the contractor reaches 90% billing of total value of works to be executed.
60.6	The bank guarantee shall be kept valid till the entire advance amount is recovered.
60.7	Invoice for advance against individual stage as per above to be raised immediately & prior to accomplishment of activities/ event, associated with subsequent stage advance.
60.8	All other terms and conditions of IBRA not mentioned above shall be governed by the pertinent provisions of GCC of tender.

ANNEXURE-C TO TCN-04 (APPENDIX – III (Rev-01))		
Tender no PSER:SCT:NKP- M1883:18.	Erection, Testing and Commissioning of Air Cooled Condenser (ACC) with Associated Auxiliary System etc. for unit # 1, 2 & 3 of 3x660 MW North Karanpura STPP, Jharkhand.	Page 1 of 5

MAJOR TOOLS AND PLANTS & MMDs TO BE DEPLOYED BY THE CONTRACTOR FOR EXECUTION OF JOB OF UNIT # 1, 2 & 3.		
Following Major T&Ps to be arranged by contractor within the time against each item		
Major T&P items Description	Quantity	Deployment period from LOI or Hand over of site which is later / Remarks
40 T Auto Crane: 24.5m Main Jib + 7.5m Fly Jib	1No.	Within 30 days
25 T Flat Jib Crane (Tower Crane): Range of 70m Height of 74m	2Nos.	Within 45 days
Welding Plant Z X 7400~500 Contravariant DC manual welder ZX7400~500	As required	Within 45 days
DG set. (capacity as per requirement)	1No.	Within 30 days
Compressors : 1.0 M ³ / Min 1.0Pa Amount of steam exhausted: 1.0m ³ /Min Pressure 1.0Pa, Power : 7.5KM/P	1No.	Within 30 days
Air leak test blower of adequate capacity as per requirement	As reqd,	During Testing period
Hydraulic Test - Pressurizing Pump of adequate capacity as per requirement	As reqd,	During Testing period
Materials required for pipe tower for ACC one column: 1) 500 nos. 6 m length 40 NB pipes (pipe weight 4.5 kg/m) 2) 100 nos. 4 m length 40 NB pipes 3) 100 nos. 3 m length 40 NB pipes 4) 750 pieces single clamp 5) 250 pieces double clamp 6) 250 m 12 mm wire rope 7) 4 nos. 3 T turn buckle 8) 20 nos. D-clamp	For 04 Nos ACC Column	Within 30 days for 02 nos ACC Column and within 60 days for another 02 nos ACC Column.
Construction of temporary site office duly furnished with required furniture for office-functioning of tentatively 04 officials, having proper illumination arrangement, fitted with Air conditioner and other basic facilities like: Urinal, toilet etc. This office will be suitably located in adjacent to the Vendor's site office since this office will be used by the representatives of ACC supplier for necessary guidance and supervision of ACC job.	1 set	Within 45 days

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Provision of separate 2/3 rooms shall be kept in the site office.		
Angle grinders: Grinding disk diameter : 100mm, Power : 670W	10 Nos	Within 30 days
Impact wrench + Sockets. M10~M30	3 Sets	Within 30 days
Torque wrench. M30	3 Nos	Within 30 days
Measuring / levelling equipment (Total station & Auto Level with Staff).	1 Set	Within 30 days
Soft Nylon rings + Chain blocks + Pull-Lifts + U shaped shackles.	10 sets	Within 30 days
Nylon sling: 2 M - 2t, 5 M - 10t, 10 M - 20t, Chain blocks 5t, 10t	3 each type	Within 30 days
U shaped shackles 10t, 20t	4 sets each	Within 30 days
Sledge hammer in 10 psi, hammer in 2 psi	3 each	Within 30 days
drilling tool in 5-M to 30-M,	1 set	Within 45 days
Steel tape in 10-30	3 sets	Within 30 days
box spanner adjustable spanner in 200mm - maximum opening 25mm,	3 Nos	Within 30 days
adjustable spanner in 300mm - maximum opening 35mm etc.	3 Nos	Within 30 days
Safety Harnesses + Personal Protection Equipment: Each person will be equipped with one set according to the number of people in ACC building	As reqd.	Within 45 days
12MT and 08 MT Hydra Crane/ Escort/ Tata P&H-1320 or equivalent	3 Nos	Within 30 days
Electro Hydraulic Pipe bending m/c	Two	As required at site
Trailers with suitable capacity 30 T	2 Nos	As required at site
Welding Generators (Electric as well as Diesel)	Around 10 nos.	Within 30 days
3 Phase complete set up for drawal of Construction Power	As Required	Within 30 days
Radiography arrangement including source and film viewer	2 Nos	Within 45 days
TIG Welding Sets	3 sets	Within 30 days
Stress Reliving equipment with Temperature Recorders	2 Sets	Within 30 days
Electrical Baking Oven (Big)	2 Nos	Within 30 days
Electrical Baking Oven(portable)	15 Nos	Within 30 days
Portable Pipe Cutting & Bending M/C for bending pipes upto Nb 100 mm.	1 No.	Within 45 days
Step Down Transformer(230 V/24V) with	As reqd.	Within 45 days

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adequate number of lamps of 24 Volts		
Erection/Commissioning Fixtures	As reqd.	Within 125 days
Coat-meter for thickness checking of Paint thickness	01 No.	As required
M64 X 2 Tap set	02 Nos.	As required
Digital multimeters (3.5 digits)	03 Nos.	As required
Digital multimeters (4.5 digits)	01 No.	As required
Tongue Testers	As reqd.	As required
30 A 3 phase Variac	As reqd.	As required
Micro-Ohm meter (measuring upto 1 micro-ohm)	As reqd.	As required
Motorised megger (measuring upto 5KV range)	As reqd.	As required
HV Test Kit (upto 50 KV DC)	As reqd.	As required
Vernier	As reqd.	Within 30 days
Micro-Meter (both inside and outside)	As reqd.	Within 30 days
Multi Sheave pulley upto 100 MT	As reqd.	As required
Single Sheave pulley blocks upto 20 MT Capacity	As reqd.	As required
Gas cutting torches of different sizes	5 sets	Within 30 days
Pistol Drilling M/c	2 Nos	As required
Wooden / concrete Sleepers	500 Nos	Within 45 days
Air tightness Test pumps	02 Nos.	Within 180 days
NDT test kits as per requirement	As reqd.	Within 45 days
Steel Tapes of different sizes as per requirement	As reqd.	As required
Feeler Gauges of different sizes	As reqd.	As required
Vernier Callipers of different sizes as per requirement	As reqd.	As required
Taps and die sets as per requirement	As reqd.	As required
Spirit levels as per requirement	As reqd.	As required
Hg manometer	As reqd.	As required
1.0 KV/500V Megger as per requirement	As reqd.	As required
Spray painting m/c as per requirement	As reqd.	As required
Fillers of different sizes as per requirement	As reqd.	As required
Portable fire extinguishers as below: Soda acid - 4 sets. Dry chemical powder - 4 sets CO2 - 3 sets. Water & sand bucket (4 buckets in one stand) - 3 sets. Fire hose with nozzle (50 M length) - 3 sets.		Within 60 days

T&P shown in the above mentioned list are tentative based on planned progress requirement. Actual Mobilisation schedule, based on front availability, drawings and material availability at site is

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to be reviewed and mutually agreed with BHEL site periodically from time to time for mobilisation of major T&Ps, and the same have to be adhered to. No change will be permitted without written approval of BHEL site.

Further requirement will be reviewed time to time at site and contractor will provide additional T&P / equipment to ensure completion of entire work within schedule time without any financial implication to BHEL. All other T&Ps shall be provided by the contractor without any extra cost to BHEL. Vendor will give advance intimation & certification regarding capacity etc prior to dispatch of heavy equipment.

All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.

In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof at the following rates

Major T&P items	Recovery rates
40 T Auto Crane: 24.5m Main Jib + 7.5m Fly Jib	Rs.25000/- per week or part there of
25 T Flat Jib Crane: Range of 70m Height of 74m	Rs.30000/- per week or part there of
Welding Plant Z X 7400~500 Contravariant DC manual welder ZX7400~500	Rs.2000/- per week or part there of
DG set. (capacity as per requirement)	Rs.10000/- per week or part there of
Compressors : 1.0 M ³ / Min 1.0Pa Amount of steam exhausted: 1.0m ³ /Min Pressure 1.0Pa, Power : 7.5KM/P	Rs.5000/- per week or part there of
Scaffolding including tower and walkway Scale for each concrete column of ACC	Rs.6000/- per week or part there of
Torque wrench. M30	Rs.1000/- per week or part there of
Soft Nylon rings + Chain blocks + Pull-Lifts + U shaped shackles. Nylon sling: 2 M - 2t, 5 M - 10t, 10 M - 20t, Chain blocks 5t, 10t	Rs.2000/- per week or part there of
12MT and 08 MT Hydra Crane/ Escort/ Tata P&H-1320 or equivalent	Rs.25000/- per week or part there of
Electro Hydraulic Pipe bending m/c	Rs.500/- per week or part there of
Trailers with suitable capacity 30 T	Rs.15000/- per week or part there of
Welding Generators (Electric as well as Diesel)	Rs.1000/- per week or part there of
All other Items	As per discretion of Engineer

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The above major T&P list is indicative only. Additional T & Ps, if required, have to be mobilized by the contractor within the quoted/accepted rate.

MEASURING AND MONITORING DEVICES (MMD) - Straight Edge, Master Level, Square Level, Inside & Outside Micrometer, Taper Gauge, Filler Gauge, Dial Gauge etc. ----- As per requirement.

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Erection, Testing and Commissioning of Air Cooled Condenser (ACC) with Associated Auxiliary System etc. for unit # 1, 2 & 3 of 3x660 MW North Karanpura STPP, Jharkhand.	
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	2.0	BHEL's NIT, vide reference no. PSER:SCT:NKP-M1883:6528 Date: 20-02-2018.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:NKP-M1883:TCN-01 Date: 28-02-2018.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:NKP-M1883:TCN-02 Date: 07-03-2018.
	5.0	BHEL's TCN-03, vide reference no PSER:SCT:NKP-M1883:TCN-03 Date: 19-03-2018.
	6.0	BHEL's TCN-04, vide reference no PSER:SCT:NKP-M1883:TCN-04 Date: 23-03-2018.
	7.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)