

	NOTICE FOR CHANGE/ CLARIFICATION ON TENDER SPECIFICATIONS	Enquiry No 77/21/6103/LSY
ISG Bangalore	Ash Handling Plant (AHP) Package for 5X800MW Yadadri TPS, Nalgonda Dist, Telangana State	

Corrigendum-6

Dated: 07-March-2022

Tender Ref: 77/21/6103/LSY for “Ash Handling Plant (AHP) Package” for 5X800MW Yadadri TPS, Telangana State.

With reference to the above referred tender, please find the following documents with regard to changes/ clarification in the tender:

- 1) Changes in Pre-Qualifications (PQR)
- 2) Changes in PBG clause no.11 of SCC
- 3) Pre Bid Clarifications-6
- 4) Pre Bid Clarifications-7
- 5) Pre Bid Clarifications-8

The documents mentioned above shall supersede the earlier revisions of the respective documents.

The above mentioned clarification/ changes/ documents shall form integral part of the tender documents and shall become part of Purchase Order/ Contract after finalization. Offers submitted by bidders shall be in compliance to the same.

All bidders are required to submit the signed & stamped/ digitally signed copy of this corrigendum along with all enclosed documents as a token of acceptance.

All other terms & conditions of the tender remain unchanged.

Note: Bids submitted by bidders before issuance of this corrigendum may get deleted/ cancelled automatically by the website upon publication of this corrigendum. Such bidders are required to check the submission status of their bids and ensure that their complete offers are re-submitted with all necessary confirmations/ compliance to the corrigendum issued against the tender. BHEL shall not entertain any correspondence from bidders in this regard after opening of the Part-1 bid.

For Queries, if any, Contact:

Lakshman Singh Yadav

Dy Manager/ MM

BHEL-ISG, Prof. C.N.R.RAO CIRCLE, MALLESWARAM,

BANGALORE-560012

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BHEL- ISG - BANGALORE
PRE- QUALIFICATION REQUIREMENT FOR BIDDERS (Rev.01)

Tender/ Enquiry ref: 77/21/6103/LSY dated 06-01-2022
Item/ Work Description: Ash Handling Plant (AHP) Package
Project: 5X800MW Yadadri TPS, Nalgonda Dist, Telangana State

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01.00.00 TECHNICAL CRITERIA:

The bid is open for participation to those bidders who satisfy the following Technical requirements:-

01.01.01 The bidder should have executed at least one (1) number Ash Handling Plant (AHP) preferably in India for a thermal power station of capacity not less than 500 MW using coal similar to Indian coal and should have executed at least one (1) similar ash handling plant using sea water /plain water , during last 10 years involving design, engineering, manufacture / procurement, supply, erection & commissioning (or supervision of erection & commissioning) comprising the following systems which should be in successful operation for at least (1) year as on date of submission of the bid.

- a. Bottom ash handling system comprising jet pump system in conjunction with water impounded bottom ash hopper designed for minimum **56 TPH** (on dry ash basis) capacity or more for pulverized coal fired boilers.

AND

- b. First stage fly ash handling system for conveying fly ash from ESP hoppers to Intermediate Surge Hopper (ISH) by vacuum conveying system designed for minimum **35 TPH** capacity (dry ash basis) per stream.

AND

- c. Second stage fly ash handling system for conveying fly ash from Intermediate Surge Hopper (ISH) to Fly ash silos by pressure conveying system designed for minimum **71 TPH** capacity (dry ash basis) per line for a distance not less than 500 mtrs.

AND

- d. High Concentration Ash Slurry Disposal (HCSD) System for minimum **106 TPH** capacity (dry ash basis) per line.

The above Clauses 01.01.01 (a), (b), (c) and (d) can be in one single plant or in a combination of plants.

01.01.02 Bidder who is a supplier of ash handling systems but does not meet the requirements under clause 1.01.01 (a), (b), (c) and (d) in full can also participate provided he has executed at least the following systems of ash handling plant involving design, engineering, manufacture, supply, erection & commissioning (or supervision of erection & commissioning):

- a. Bottom Ash Handling System comprising a jet pump system in conjunction with Water impounded Bottom Ash Hopper.
b. Fly Ash Handling System for conveying Fly Ash from ESPs in dry form with a combination of vacuum conveying and pressure conveying system with provision of both wet and dry handling.
c. Ash Slurry Handling System.

The systems mentioned at 01.01.02 (a), (b) and (c) above should be in successful operation in at least two (2) plants for at least two (2) years during the last 10 years as on date of submission of bid and should have been installed for pulverized coal fired boiler units in India generating not less than 180 TPH of Ash per boiler.

AND

Collaborate(s)/Associate(s) with party (ies) who meet(s) either the total requirement or the balance part under 01.01.01 (a), (b) and (c) above which the bidder himself is not able to meet.



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In such a case, the Bidder shall be required to furnish consortium agreement jointly executed by the Bidder and the collaborator(s) / Associate(s) and each executant, shall be jointly and severally liable to employer for successful performance of the relevant system, as per the format (Annexure- A) enclosed along with bid. The collaboration agreement should be submitted along with the bid. In such a case, each Collaborator / Associate shall be required to furnish an on demand bank guarantee at the time of placement of order as follows:

- i. INR 2 Million (Rupees Two Million) for Collaborator/ Associate for Jet pumping system
- ii. INR 5 Million (Rupees Five Million) for Collaborator/ Associate for Vacuum conveying system
- iii. INR 5 Million (Rupees Five Millions) for Collaborator/ Associate for Pressure Transportation system

AND

Collaborate(s)/Associate(s) with party who meets the requirement under 01.01.01 (d) above which the bidder himself is not able to meet.

In such a case, the Bidder shall be required to furnish Agreement of Support jointly executed by the Bidder and the collaborator / Associate for successful performance of the HCSD system as per the format (Annexure-B) enclosed along with bid. The Agreement of Support should be submitted along with the bid.

In case bidder collaborates / associates for more than one system with a party, then the Collaborators / Associate shall be required to furnish an on demand bank guarantee for an amount arrived at by adding up the amounts for the relevant systems as above.

01.01.03 The activity of design and engineering under 01.01.01 (a), (b), (c) and (d) should have been carried out by the bidder and not through any external design agency/agencies.

For design and engineering activity referred under paras 01.01.02 the activity should have been carried out by either the bidder or through design agency/agencies having experience for reference systems. In case of collaborator(s)/associate(s) meeting the balance part of total requirement under clause 01.01.01 (a), (b), (c) and (d) the activity of design and engineering for the reference systems should have been carried out by them.

Bidders qualifying under Sl No. 01.01.02 and collaborating/associating with party(s) meeting total/balance part of 01.01.01 (a), (b), (c) and (d) shall follow the following for supply and manufacturing of equipment. Bidder shall manufacture from their manufacturing setup based on collaborator(s)/associate(s) drawing for the clause which bidder himself is not meeting the requirement but the collaborator(s)/associate(s) is meeting the requirement, then the collaborator(s)/associate(s) shall approve bidder's manufacturing facilities and manufacturing quality standards. Also after the manufacture of the items, the product shall be inspected by the respective collaborator(s)/associate(s) and furnish certificate of conformance (COC) for the product.

Also, BHEL/Customer shall approve manufacturing facilities of the equipment of the vendor's self-manufacturing items incase the items are being manufactured by bidder as per collaborator(s)/associate(s) design and manufacturing drawing.

Bidder shall submit the following documents along with bid for pre-qualification requirement. Non-submission of below mentioned documents along with bid is liable for rejection. Hence all bidder(s) shall adhere to submission of following documents for meeting Pre-qualification requirement.

- a. List of experience for the system described above.
- b. Manufacturing facilities, equipment, manpower details duly signed by bidder shall be furnished.
- c. Bidder shall provide documentary evidence in support of his claim for having experience in design, manufacture, testing and supply, E&C, performance of AHP meeting the requirements mentioned in sl. Nos. 01.01.01 or 01.01.02 for Ash Handling Plants which are in operation as on date of submission of the bid. Following documentary evidence (as given below) for supply of items as mentioned in clause no. 01.01.01 or 01.01.02 shall be submitted along with bid:



BHEL- ISG - BANGALORE
PRE- QUALIFICATION REQUIREMENT FOR BIDDERS (Rev.01)

Tender/ Enquiry ref: 77/21/6103/LSY dated 06-01-2022
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Project: 5X800MW Yadadri TPS, Nalgonda Dist, Telangana State

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- d. Letter of Award (Purchase order copies).
- e. End customer's address and contact details (ph.no, emails) to be furnished.
- f. Performance Certificate from Customer.
- g. If the bidder is a foreign party, he shall make a collaboration/ consortium agreement with an Indian agency for erection and commissioning at site. Such bidders shall submit collaboration/ consortium agreement as per enclosed Annexure-A enclosed.

FORMAT to be filled by Bidder(s):

Sl. No	Name of the Project	Brief Scope of the work	Order Ref. No & Date	Date of Completion As per P.O.	Remarks

B. Pre-Qualification Requirement: (Financial)

1. (a) Bidder shall have an average annual financial turnover not less than Rs 100 Crore (Rupees One Hundred Crores Only), during the three consecutive Financial Years (FYs) from immediate four previous Financial years as of 31st Mar2021. (Example: FY to be considered shall be 2017-18, 2018-19 & 2019-20 OR 2018-19 & 2019-20 & 2020-21)).

And

(b) Bidder shall have a positive NET WORTH as per the latest audited financial year;

2. In case any "Bidder does not satisfy both the requirements or any of the financial criteria, stipulated at clause B-1 (a) & (b) as above, the Bidder would be required to meet all of the following Requirements stipulated below:
 - (i) the bidder shall have Rs 50 crore or more as Average annual financial turnover during any the three consecutive Financial Years (FYs) from the immediately preceding four FYs as of 31st Mar2021, (Example: FY to be considered shall be 2017-18, 2018-19 & 2019-20 OR 2018-19 & 2019-20 & 2020-21),
 - (ii) The Bidder shall also have annual financial turnover not less than Rs 100 Crore (Rupees One Hundred Crores Only), in any one of the three years in the consecutive three years considered as under clause B-2 (i) stated above.
 - (iii) The Bidder shall furnish from the Bankers along with the bid confirming the availability of a minimum of Rs 50 Crore, as unutilized line of credit as on a date not earlier than 15 days prior to the original date of PQ & Technical bid opening, as available exclusively for completion of entire scope of the tender, through a letter, specifically mentioning the tender number as per enclosed format vide **Annexure-C** The line of credit should be arranged from any of the Banks stated in the tender **SCC Annexure-II**
 - (iv) The Bidder shall furnish along with the Bid, an additional Bank Guarantee equivalent to a sum of Rs 20 crore (Rupees Twenty crore only) in the same format and terms prescribed for Performance BG and the above additional BG shall be over and above the PBG required as per tender; Bidder shall keep the additional BG upto successful completion of the contract;
 - (v) The Bidder shall comply with all of the above requirements (i) to (iv) if option under clause B-2 is to be exercised by the bidder;



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3. Bidder should submit financial accounts (audited, if applicable comprising of Audit report, Balance Sheet, Profit & Loss A/c Statement for FY 2017-18, 2018-19 & 2019-20 OR 2018-2019, 2019-2020 & 2020-2021. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by registered Chartered Accountant/Statutory Auditor for Companies.
4. Other Income shall not be considered for arriving at Annual Turnover/Sales.
5. Financial pre-qualification of the foreign bidder (other than Indian bidders) may also be evaluated on the basis of the report from a reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. The foreign bidder is to submit the report from reputed third party. All Foreign language documents shall be translated to English language either by a certified agency or translated verification by an authorized agency. Credit rating certificate also shall be furnished for financial credibility of the organization.
6. For PQ evaluation of foreign bidder, exchange rate (TT selling rate of SBI) as on scheduled date of the tender opening (Part-1 bid in case of two part bid) shall be considered.

A. Important Notes:

1. The word "executed" means bidder should have achieved the criteria specified in the above QR even if the total contract is not completed/closed.
2. BHEL will provide format for Bank guarantee to the successful bidder.
3. Bidder has to submit all credentials/ details, required by the customer for seeking approval of customer. In case customer does not approve the credentials of the bidder, the bidder's offer will be rejected.
4. **Bidder shall submit the point wise confirmation to the PQR clauses, properly indexed along with the offer.**
5. For foreign bidder(s), there shall be an authorized representative in India on behalf of the System supplier for single point communication with BHEL for submission of bid/attending bid queries/ bid clarifications, follow up, submission of engineering information in time, dispatches for smooth execution of contract.
6. BHEL reserves the right to assess the capabilities and capacity of the Bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of the Employer.
7. Canvassing i.e. soliciting favor, seeking advantage etc. in any form is strictly prohibited and any bidder found to have engaged in canvassing shall be liable to have his bid rejected summarily.
8. BHEL reserves the right to:
 - 8.1 Accept or reject any bid received at its discretion without assigning any reasons whatsoever.
 - 8.2 May ask for further qualification during techno commercial scrutiny of bids received and bidder will comply.
 - 8.3 Evaluation of bidder at their works.
9. After technical evaluation of the bidder's offer, the bidder shall be subjected to approval by Customer / Customer's consultant. The bidder who is not approved by customer/ customer's consultant will not be considered and their sealed bid price shall not be opened.
10. In respect to PQR qualification, Bidder is required to note and consider latest notifications/Orders issued by Govt. of India on or before due date of bid submission subjected to approval by BHEL.

Annexure-C

(applicable for cases where bidder's working capital is required to be ensured by a Line of credit as required as per Financial criteria under clause B-2)

(To be issued by Bidder's Bank on its letter head)

Ref No. ____

Date:

To
(Name & Address of the Bidder/Contractor)

Sub: **LINE OF CREDIT FOR BHEL ISG TENDER NO:.....**
for (title scope of tender)

Dear Sir,

This letter for line of credit is issued for the above-referred tender of M/s Bharat Heavy Electricals Limited , Industrial Systems Group, Bangalore.

We _____ (name of the Bank)

registered under the laws of _____ (name of the country)

having head/registered office at

..... do hereby confirm the availability of

Un-utilized line of credit for meeting the requirement of about Rs 50 crore (Rupees Fifty crore only)

For _____ (name of bidder) having its

registered office at _____ ,

against the tender .

If the bidder becomes successful for award against the tender, the line of credit shall be extended towards successful performance and completion of contract for the entire tender scope.

(SIGNATURE)

Full name, designation and official address
with Power of Attorney No. & Bank Stamp.
Authorized signatory

Note:

- The line of credit should be from Banks as per SCC annexure-2
- Bank to ensure that Bank has taken cognizance of the BHEL tender terms & conditions in this regard.
- The line of credit letter must be addressed to the name & address of the bidder, who is bidding in BHEL tender.

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
CHANGES IN PBG CLAUSE NO-11 OF SCC REV 00
Date: 07-03-2022

Sl. No.	Section	Clause No.	Existing PBG	Revised PBG
1	PERFORMANCE BANK GUARANTEE	11	<p>PBG, in line with clause no 11 of general commercial terms & conditions of GCC, rev-01, is to be submitted within 10 days from the date of Letter of Intent (LOI). Clause no- 11.4 of general commercial terms and conditions of GCC, REV 01 shall be read as: Validity of the Bank Guarantee shall be for the entire Guarantee period + 3 months claim period. Initially, it should be at least 36 months (from the date of LOI) + 03 months claim period, later extended to cover the guarantee period, two months before its expiry.</p> <p>The PBG amount can be reduced by equivalent amount of corresponding unit after expiry of Guarantee Period of corresponding unit subject to COD of the power plant for corresponding unit. The order/ billing value and corresponding PBG amount for each unit shall be based on the approved billing schedule. However, the final decision on unit-wise order/ billing value for the purpose of reduction of PBG amount shall be at the sole discretion of BHEL and the bidder shall be bound to accept the decision made by BHEL in this regard.</p> <p>Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT / contract, from the bills along with due interest.</p>	<p>Vendor should submit Contract Performance Bank Guarantee 5% of Order/ Contract value, is to be submitted within 10 days from the date of Letter of Intent (LOI). Clause no- 11.4 of general commercial terms and conditions of GCC, REV 01 shall be read as: Validity of the Bank Guarantee shall be for the entire Guarantee period + 3 months claim period. Initially, it should be at least 36 months (from the date of LOI) + 03 months claim period, later extended to cover the guarantee period, two months before its expiry.</p> <p>The PBG amount can be reduced by equivalent amount of corresponding unit after expiry of Guarantee Period of corresponding unit subject to COD of the power plant for corresponding unit. The order/ billing value and corresponding PBG amount for each unit shall be based on the approved billing schedule. However, the final decision on unit-wise order/ billing value for the purpose of reduction of PBG amount shall be at the sole discretion of BHEL and the bidder shall be bound to accept the decision made by BHEL in this regard.</p> <p>Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as</p>

			<p>The BG has to be issued in hard copy and not through SFMS. Our bank details for information are: Name of Bank- ICICI BANK LIMITED Branch Address- ICICI BANK TOWER, # 1, COMMISSARIAT ROAD, BANGALORE – 560025 Branch IFSC Code- ICIC00000002 Account No.- 000205003783 Nature of account- COLL A/C</p> <p>The Bank Guarantee shall be sent to the tender inviting officer under registered post (A/D).</p> <p>Note: In Case of Bank Guarantees submitted by Foreign Vendors-</p> <p>a. From Nationalized/ Public Sector/ Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in Bangalore i.e. Demand can be presented at the Branch located in Bangalore.</p> <p>b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)</p> <p>b.1 In such cases, the Bank Guarantee issued by any of the Consortium Banks only will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). All charges for issuance of Bank Guarantee/ counter- Guarantee should be</p>	<p>per terms defined in NIT / contract, from the bills along with due interest.</p> <p>The BG has to be issued in hard copy and not through SFMS. Our bank details for information are: Name of Bank- ICICI BANK LIMITED Branch Address- ICICI BANK TOWER, # 1, COMMISSARIAT ROAD, BANGALORE – 560025 Branch IFSC Code- ICIC00000002 Account No.- 000205003783 Nature of account- COLL A/C</p> <p>The Bank Guarantee shall be sent to the tender inviting officer under registered post (A/D).</p> <p>Note: In Case of Bank Guarantees submitted by Foreign Vendors-</p> <p>c. From Nationalized/ Public Sector/ Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in Bangalore i.e. Demand can be presented at the Branch located in Bangalore.</p> <p>d. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)</p> <p>b.1 In such cases, the Bank Guarantee issued by any of the Consortium Banks only will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign</p>
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			<p>borne by the Vendor.</p> <p>b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl. no. b.1 will required to be followed.</p> <p>b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time).</p> <p>b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.</p> <p>Performance Bank Guarantee (PBG) shall be submitted as per the format given in Annexure-I to this SCC.</p>	<p>Bank in favour of the Indian Bank (BHEL's Consortium Bank). All charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Vendor.</p> <p>b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl. no. b.1 will required to be followed.</p> <p>b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time).</p> <p>b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.</p> <p>Performance Bank Guarantee (PBG) shall be submitted as per the format given in Annexure-I to this SCC.</p>
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5 x 800 MW YADADRI THERMAL POWER STATION					
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)					
PRE BID CLARIFICATIONS-6					
Date:07-03-2022					
SL.No.	Section / Clause / Page No.	Statement of the referred clause	Clarification Required	Purpose for Clarification	BHEL Reply
1	Drawing No: IS-1_FA-699-308-M005(sheet 03 of 03)	Recycle water pump shown here are 6 working and 2 Standby total 8	Recycle water pump shown here are 6 working and 2 Standby total 8, but in the Aux Power sheet sl No.(H.5) it has been shown 4 working and 2 standby total 6	Kindly confirm	The Recycle Water Pump shall be 8(6W+2S) nos in line with flow diagram. Revised Aux power sheet enclosed .
2	Scope Matrix- Civil ;C.3	Piping/cable tray support inside and outside Vacuum pump House and Compressor house building	Whose scope are these inserts	Kindly confirm	The inserts for pipe/cable supports are in BHEL scope. However, as per note no 3 of Annexure-13, Wherever required in the absence of inserts plates etc. HILTI make or any other approved anchor fasteners supply & fixing is in bidder scope. Kindly note that the pipe and valves supporting platforms inside the Vacuum Pump Houses, as shown in the GA of Vacuum Pump Houses , are in bidder scope.
3	Scope Matrix- Civil ;D.1	Pipe inserts at clarifier and Silo	Whose scope are these inserts	Kindly confirm	Insert plate shall be provided by BHEL. However, supply of any special insert/ adopters/ puddle flange/man hole frames /equipment frames(like PRV, Terminal Box, vent filter etc.) /pipes sleeves/underground pipes etc. embedded in concrete/wall of AHP Utilities (AHS Buildings, Sump/tank/pit, Silo, Clarifier, chemical house, parshal flume etc.) are in bidder scope.
4	Scope Matrix- Civil ;F.3	Secondary supporting member for fixing pipe clamps, Pipe clamps with pocket bolts and grouting of pockets on pedestals.	Whose scope are these inserts , mainly for the HCSD Pipe supports in the pipe pedestral	Kindly confirm	Any Type of Secondary supporting member like angle, channel etc. required at Pipe rack and Pedestal at the time of erection for supporting and fixing the pipes (Ash, Water, Air, Slurry, HCSD etc.) and its fittings and bends, pipe/ fittings / bends clamps, Pipes and pipe fittings/bends clamps with pocket bolts and grouting of pockets on pedestals are in bidder scope.

5	Specification No: IS-4-ES-699-300-M001, Clause No.2.03.10 Page 19, point No10.	MOC of Wetted parts/Components of the water pumps shall be SS	But in the referred spec of Kothagudem TPS the MOC are different	kindly confirm	<p>Bidder shall read as "The MOC of wetted parts of fasteners shall be SS."</p> <p>However, Bidder to ensure that the MOC of Ash Water pumps shall be suitable for TDS upto 2000 ppm as mentioned in the Specification No: IS-4-ES-699-300-M001, Clause No.2.03.10 Page 19, point No. 9 and provide the MOC of the Pumps accordingly.</p> <p>In General, MOC shall be as per TSGENCO specification. However, Bidder to provide the MOC of Ash Water pumps as following: -</p> <p>i) Casing- Cast Iron to IS: 210, Grade FG-260. However, casing of HP Seal Water Pump shall be Cast Steel (ASTM A 216 Gr-WCB)</p> <p>ii) Impeller- ASTM A 743 (SS-CF8M) shall be preferable.</p> <p>iii) Wear Plate/liners wear rings - ASTM A 743 (SS-CF8M) shall be preferable.</p> <p>iv) Shaft- SS 410 shall be preferable.</p> <p>v) Shaft Sleeve- ASTM A276, SS-410 (H) (250-300 BHN) shall be preferable.</p> <p>The MOC of Ash water Pumps mentioned above is minimum. However, If required to meet the MOC suitable for TDS upto 2000 ppm, bidder shall provide the higher grade of MOC .</p>
6	Specification No: IS-4-ES-699-300-M001, Clause No.2.03.01 Page 14, point No5.	Cooling water ,Raw water, Seal/Clarified water	Kindly furnish the temperature available	Available Temperature	<p>The approximate available temperature is as follows:- Cooling Water Temperature-38°C Raw Water Temperature-33°C Seal/Clarified Water Temperature-33°C</p>
7	Drawing No: IS-1_FA-699-308-M005(sheet 03 of 03)	RWPH Submersible Pump	Where is to be installed , spec. if any and if it requires any valves	kindly confirm	<p>Submersible Pump shall be installed in Recovery Water Sump as mentioned in GA of Recovery Water Pump House. Non return valves, Pneumatic operated Discharge valves, Instruments like PG, PS and PT in the discharge line shall be provided inline with drain pump discharge line mentioned in Silo area drain Pump (ref Drawing No: IS-1-FA-699-308-M004A (sheet 05 of 05)) . However, the discharge of drain shall be in Ash pond as mentioned in flow diagram (Ref Drawing No: IS-1-FA-699-308-M005(sheet 03 of 03)) not to the nearest toe drain.</p>

AUX POWER AHP of 5x800 MW Yadadri AHP Package (BA in Wet Mode & FA in Dry Mode)														
			AHP FOR UNIT-1,2		AHP FOR UNIT -3,4,5									
SI No	SYSTEM	TOTAL	WORKING(A1)	STAND BY	WORKING(A2)	STAND BY	BKW Considered	Selected Motor KW	MOTOR Efficiency	Guranteed Power(B)	DUTY FACTOR®	AHP FOR UNIT-1,2 (A1xBxC)	AHP FOR UNIT -3,4,5 (A2xBxC)	
A	Bottom Ash Handling System													
A.1	Clinker Grinder	30	6	6	9	9					1			
A.2	BA Overflow Pump	10	2	2	3	3					1			
B	FLY ASH SYSTEM													
B.1	Vacuum pump	60	16	8	24	12					1			
B.2	Transport Air Compressor (Oil free screw type)-1st Stage	12	8	4							1			
B.3	Transport Air Compressor (Oil free screw type)-2nd Stage	18			12	6					1			
B.4	Air dryer for TAC-1st Stage	12	8	4							1			
B.5	Air dryer for TAC-2nd Stage	18			12	6					1			
B.6	Instrument Air Compressors (Oil free screw type)	7	2	1	3	1					1			
B.7	Air dryer for IAC	7	2	1	3	1					1			
B.8	Fluidising Blower for ESP	10	2	2	3	3					1			
B.9	Fluidising Heater for ESP	10	2	2	3	3					1			
C	SLURRY DISPOSAL SYSTEM													
C.1	Slurry Disposal Pump (1st Stage)	8	2	1	3	2					1			
C.2	Slurry Disposal Pump (2nd & 3rd Stage)	16	4	2	6	4					1			
C.3	LP Seal Water Pump	8	2	1	3	2					1			
C.4	HP Seal Water Pump	9	1	2	2	4					1			
D	FLY ASH SILO UNLOADING													
D.1	Silo Fluidising Blower	10	2	2	3	3					1			
D.2	Silo Fluidising Heater	10	2	2	3	3					1			
D.3	Rotary Vane Feeder-Silo	10	4	0	6	0					1			
D.4	Motorised Unloading Spout with Vent Fan	5	2	0	3	0					1			
D.5	Ash Conditioner	5	2	0	3	0					1			
D.6	Silo area Dust Conditioning water pump	5	1	1	2	1					1			
D.7	IA compressor	4	1	1	1	1					1			
D.8	Air dryer for IAC	4	1	1	1	1					1			
E	ASH WATER SYSTEM													
E.1	BA HP Water Pump	10	2	2	3	3					1			
E.2	LP Water Pump	10	2	2	3	3					1			
E.3	ECO Water Pump	10	2	2	3	3					1			
F	ASH WATER CLARIFIER SYSTEM (at plant area)													
F.1	Flash mixer	1	1	0	0	0					1			
F.2	Clarifloculator Bridge Drive	4	4	0	0	0					1			
F.3	Alum dosing Tank Agitator	2	1	1	0	0					1			
F.4	PE dosing Tank Agitator	2	1	1	0	0					1			
F.5	Sludge pump	2	1	1	0	0					1			
G	ASH WATER RECOVERY SYSTEM (at pond area)													
G.1	AW Recovery Pump (Vertical turbine pump)	3	1	1	1	0					1			
G.2	AW Recycle Pump	8	3	1	3	1					1			
H	ASH WATER CLARIFIER SYSTEM (at dyke area)													
H.1	Flash mixer	1	1	0	0	0					1			
H.2	Clarifloculator Bridge Drive	4	4	0	0	0					1			
H.3	Alum dosing Tank Agitator	2	1	1	0	0					1			
H.4	PE dosing Tank Agitator	2	1	1	0	0					1			
H.5	Sludge pump	2	1	1	0	0					1			
	The Total hourly KW for working equipment of Stage -I in FA Dry Mode should not exceed the 9500 KW and for Stage-II 15500 KW													

AUX POWER AHP of 5x800 MW YAdadri AHP Package (HCSD System)										
Sl No	SYSTEM	TOTAL	WORKING(A)	STAND BY	BKW Considered	Selected Motor KW	MOTOR Efficiency	Guaranteed Power(B)	DUTY FACTOR@	Total Aux Power(AxBxC)
A	HCSD System									
A.1	Agitator	8	5	3					1	
A.2	Charge Pump	8	5	3					1	
A.3	Rotary Feeder with VFD	11	5	6					1	
A.4	Ash Conditioner	11	5	6					1	
A.5	HCSD Pump with VFD	8	5	3					1	
A.6	Lube Oil Pump	8	5	3					1	
A.7	Measuring Loop Pump	8	5	3					1	
A.8	HCSD Water Pump	7	5	2					1	
A.9	Seal Water Pump	4	2	2					1	
A.10	Screw Conveyor Motor	11	5	6					1	
	The Total hourly KW for working equipment of HCSD System shall be not more than 3600 KW.									

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
PRE BID CLARIFICATIONS-7
Date:07-03-2022

Sl. No.	Page / Section No.	Clause No.	Comments / Clarifications	BHEL Reply
1.	Tech Enq Spec	2.03.06	<p>...bypass arrangement across HCSD Pump... The capacity and head of the charge pump shall be capable for the same.</p> <p>Purpose of charge pump is to provide adequate suction head to HCSD pump and will be selected based on HCSD Pump requirement. Higher suction head will damage the HCSD pump components. Capacity will be same as that of HCSD pump. We understand that, with this capacity & head BHEL may decide upon the location to discharge the ash slurry, also considering the static height difference of the point of discharge. Please confirm our understanding is correct.</p>	Kindly note that HCSD charge pump shall be capable to discharge the ash to nearest discharge point of ash pond by bypassing the HCSD pump. The exact location of discharge point and static height difference of the point of discharge shall be discussed and finalised with BHEL/TSGENCO during detail engineering without any nature of implication to BHEL.
2.	Tech Enq Spec	3.00.00	<p>Spares shall be dispatched in pre-decided lots in containers/secure boxes.</p> <p>We understand that containers/secure boxes are required only for small items and not for large components or individually packed items.</p>	All spares except pipes shall be dispatched in pre-decided lots in containers/secure boxes/ individual packed items. Also refer clause 3.00.00 regarding packing details of spares.

MECHANICAL AND GENERAL CLARIFICATION

3.	Tech Enq Spec	5.1.0 & 6.00.00	<p>Timeline for engineering review & approval and for attending the inspection & testing by BHEL/Owner. As per L1 schedule, Supply & E&C (readiness) ... of Unit #1, ... 9/11 months, ...</p> <p>This project required to be completed in an unprecedented fast track mode. To prepare a practical L2 schedule, above timelines for engineering review & approval and for attending the inspection & testing by BHEL/Owner should be optimised. Please specify the minimum timelines.</p>	<p>BHEL/TSGENCO/TCE shall review and provide approval/comment within 14-21 days after submission of drawing. However, Bidder has to ensure that the revised drawing shall be submitted for approval within 7-10 days after comment. Kindly note that as per the clause 2.01.00 of technical enq. Spec, Bidder shall be solely responsible for submission and getting the Drawings / Data Sheets / QAP / Field Quality Plans / Commissioning procedures/ O& M manual/ PG Test Procedure/ Testing Procedures approved from BHEL / Customer / Customer consultant in time.</p> <p>For Inspection & testing Bidders should follow the NIT, Special conditions of the contract and Technical enquiry Specifications.</p>
4.	Tech Enq Spec	4.05.00	In the equipment capacity/motor kW chart, Rotary feeder for HCSD system & Hose pump are mentioned.	
	Kothagudem Spec Vol IVB	Pg 7: 1.11.00	Rotary feeder with VFD...	
	Kothagudem Spec Vol IVB	Pg 23: 4.8.03	Orifice feeder/Rotary feeder, Solid flow meter...	
			<p>Above items are not applicable for our design. Feeding system for HCSD is unique to individual bidder's design and ours is loss in weight-based system. Allow us to provide the same to ensure better performance.</p>	<p>It has been already mentioned in the Technical Enquiry specification that, "Bidder shall read the HCSD specification & Flow diagram (No-13A06-DWG-MAHP-006) provided in the Kothagudem NIT specification of TSGENCO and offer the suitable & proven system with detail BOQ of HCSD system complying with Kothagudem NIT specification attached with the tender." Kindly follow the same. Bidder's proven design system shall be discussed and finalised during detail engineering with BHEL and TSGENCO without any nature of implication to BHEL.</p>

MECHANICAL AND GENERAL CLARIFICATION

5.	DBR	3.8 3)	Please provide sieve analysis of fly ash practically expected for these boiler units.	It has been already mentioned in DBR-“Sieve Analysis Data mentioned in DBR is indicative only. Bidder shall consider suitable margin during design of pneumatic Ash Handling System for smooth evacuation of Fly Ash at design rate.” Bidder to follow specification.
6.	DBR	4.0 5)	We understand that these clear water pumps are not applicable.	Bidder understanding is correct.
7.	DBR	5.0 F)	We understand that the capacity is now frozen as 980 M3/hr.	The rating of each slurry Pump shall be in the range of 980-1000 m3/hr for balancing the ash slurry and water by successful bidder.

5 x 800 MW YADADRI THERMAL POWER STATION
Ash handling Plant (AHP) Package (Tender ref. 77/21/6103/LSY)
PRE BID CLARIFICATIONS-8

Date: 07-03-2022

Sl. No.	Section	Clause No.	Comments / Clarifications	BHEL Reply
1.	NIT	17	We couldn't trace out the New RA Guidelines at www.bhel.com Please share the same.	New RA Guidelines available at www.bhel.com under supplier registration at https://www.bhel.com/supplier-registration
	GCC R1 Annexure-XI	15	Whether this clause is applicable for this bid.	As per NIT Clause No.17, Annexure-XI of GCC (rev.01) is not applicable for this tender.
2.	GCC R1	9.6	Payment will be released within 45 days after receipt of complete documents...	
		Annexure-VIII (A)	Time period as per BHEL ISG for the following activities: MRC: 120 days from despatch	
	SCC	12	Completion schedule-24 months from LOI.	
		19 A (ii & iii)	75% payment ... 15% payment ...	
		24	No interest, whatsoever, shall be payable by the Purchaser/BHEL to the bidder/contractor on any delayed payment by BHEL to the bidder/contractor or any amount due to the bidder/contractor.	
		25	Levy of LD Unit-wise as per L-1 Schedule	
		Annexure-VII	L1 Schedule Supply & E&C (readiness) ... of Unit #1, ... 9/11 months, ...	
			From the above clauses, we could find that this high value project needs to be completed in an unprecedented fast track mode, literally without any cash inflow and no liability on BHEL to make payment in time. Please allow L/C payment, reduce the documentation time, delete the clause no. 24 of SCC and assure timely payment by BHEL	Bidders to follow the NIT and Special conditions of Contract.

3.	GCC R1	11.2	<p>Contract performance guarantee for 10% of order/contract value....</p> <p>As per the latest guidelines of GOI, the CPG should be 3%. Please accept 3% CPG for this project.</p>	<p>Please refer the clause No.11 of SCC Rev 00 Performance Bank Guarantee (PBG) revised from 10% to 5% . Vendor should submit Contract Performance Bank Guarantee 5% of Order/ Contract value.</p>
4.	SCC	10	Guarantee period shall be twelve months from the date of handing over of complete ash handling system.	
		12	Completion schedule-24 months from LOI.	
			<p>We understand that handing over is to be completed within 24 months from LOI. Please confirm our understanding is correct. If not, please specify the handing over period w.r.t from LOI.</p>	Bidders to follow the NIT and Special conditions of Contract
5.	SCC	22	<p>PVC not applicable for Mandatory spares.</p> <p>When main supply has PVC, it is not logical to have FIRM price for mandatory spares, when both are produced out of the same materials and during the same contract period.</p> <p>Please allow PVC for mandatory spares also.</p>	Bidders to follow the NIT and Special conditions of Contract
6.	SCC	25	<p>L1 Schedule</p> <p>There is no mention of interlinking of common facilities w.r.t completion of unit-wise contractual milestones and payments there-of. Please clarify the same.</p>	<p>Please refer the clause no.19 (Payment terms) of SCC Rev 00.</p> <p>The order/ billing value for each unit shall be based on the approved billing schedule. However, the final decision on unit-wise order/ billing value for the purpose of payment of retention amount shall be at the sole discretion of BHEL and the vendor/ bidder shall be bound to accept the decision made by BHEL in this regard.</p>