

| Sl. No.                   | Document Reference                    | Clause& Page #           | Description of Bidder Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BHEL Resolution / Reply                                      |
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| <b>Commercial Queries</b> |                                       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                              |
| 1                         | ANNEXURE-I                            | Clause 3 & Page 1/1      | Please clarify if hard copy bid submission is to be done.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Not required in case of E-procurement                        |
| 2                         | General Commercial Terms & Conditions | Clause 4.1 & Page 3,4/28 | <p>The provision is reproduced as below.</p> <p>“Excise duty actually incurred by Seller/Contractor on selfmanufactured items alone shall be reimbursed against documentary evidence. Excise duty paid by bidder on inputs, bought out items, raw materials and components consigned directly to site from sources other than Seller/Contractor's factory/works shall be included by the bidder in the quoted ceiling amount of excise duty and the same shall be payable extra at actuals limited to the ceiling amount.” We understand that M/s. BHEL shall pay Excise Duty in either case at actuals against documents. Please clarify our understanding.</p>                                                                                                                                                                                                                                                                                                                                                                                                  | Kindly refer clause no. 20 of SCC Rev.01. SCC supersedes GCC |
| 3                         | GENERAL COMMERCIAL TERMS & CONDITIONS | Clause 4.2 & Page 4/28   | <p>The provision is reproduced as below.</p> <p>“4.2.1 Central Sales Tax / Value Added Tax shall be reimbursed only if the same is paid by the Seller / Contractor to the respective Govt. authorities on direct sales by the Seller/ Contractor to the Purchaser, meeting all statutory requirements and availing all exemptions/concessions under the respective Central Sales Tax / Value Added Tax Acts. The offer should clearly indicate CST/VAT percentage and the total amount along with concessional form(s), if any.”</p> <p>“Purchaser proposes to make sale-in-transit under section 6 (2) (b) of Central Sales Tax Act where goods movement is inter-state. Form-C shall be issued and exchanged against Form-E1/E2 based on quarterly transactions. Seller/Contractor is required to submit his request in the format enclosed at Annexure-VI within 30 days from end of the Quarter, giving State-wise invoice details.”</p> <p>Kindly clarify if M/s. BHEL shall reimburse CST under sale-in-transit transaction covered under clause 4.2.4.</p> | Kindly refer clause no. 20 of SCC Rev.01. SCC supersedes GCC |

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| 4                        | GENERAL<br>COMMERCIAL<br>TERMS &<br>CONDITIONS                 | Clause<br>9.12 &<br>Page<br>12/28   | <p>The provision is reproduced as below.</p> <p>“In case of Turnkey packages ( refer clause 9.3.3 &amp; 9.4.3 ) , if the PG test is not conducted up to 24 months from the date of last dispatch for reasons not attributable to vendor, the last 5% payment will be released against Bank Guarantee of an equivalent amount, valid initially for 12 months and extendable till completion of PG test. This BG will be in addition to contract Performance Bank Guarantee for 10% of the contract value (Ex-Works / F.O.B.).”</p> <p>The text highlighted as 5% payment may please be read as 10% since the parent terms call for 10% payment under the reference.</p> | Kindly refer clause no. 15 of SCC Rev.01. SCC supersedes GCC |
| 5                        | GENERAL<br>COMMERCIAL<br>TERMS &<br>CONDITIONS                 | Clause<br>16.2.3 &<br>Page<br>18/28 | We sincerely request prior intimation, discussions and mutual consent between both the parties before resorting to this action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Terms and conditions shall be as per enquiry                 |
| 6                        | Special<br>Conditions of<br>Contract<br>(SCC)<br>Revision No.1 | Clause 16<br>& Page<br>4/16         | We request addition of the provision under the quote “if the PG test is not conducted up to 24 months from the date of last dispatch for reasons not attributable to vendor, then the Guarantee Period shall be Twelve (12) months from the scheduled date of PG test as per the approved L2 schedule”.                                                                                                                                                                                                                                                                                                                                                                | Not Acceptable                                               |
| 7                        | Special<br>Conditions of<br>Contract<br>(SCC)<br>Revision No.1 | Clause 21<br>& Page<br>6,7/16       | We sincerely request LD to be capped @ 5% under shortfall in performance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Not Acceptable                                               |
| 8                        | Special<br>Conditions of<br>Contract<br>(SCC)<br>Revision No.1 | Clause 23<br>& Page<br>7/16         | We sincerely request Maximum LD deduction to be capped @ 10% under failures in delivery (supply & E&C) as well as shortfall in performance both put together.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Not Acceptable                                               |
| <b>Technical Queries</b> |                                                                |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                              |
| 1                        | Enquiry Specifications<br>Rev 1                                | Clause # 2 & Page14/65              | Please intimate row/hopper wise ash distribution in ESP hoppers, SCR hoppers, APH hoppers to enable appropriate sizing of airlock vessels/Pump tank below each of the above hoppers and the individual branch pipe sizes.                                                                                                                                                                                                                                                                                                                                                                                                                                              | During detailed engineering stage.                           |
| 2                        | Enquiry Specifications<br>Rev 1                                | Clause 4.1 page14 /65               | We have designed the plant on worst coal basis as per the stipulations; however please intimate quantum/frequency of normal coal supply to enable estimation of best average guaranteed auxiliary power consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Design shall be as per worst coal.                           |
| 3                        | Enquiry Specifications<br>Rev 1                                | Clause # 4.2 (1)<br>&Page17/65      | Kindly let us know the Furnace Aperture Size above BA Hopper. This is not very clear in the Tender Drawing No. 1_00_201_07086                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Seal Plate drawing is attached for reference.                |

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| 4 | Enquiry Specifications<br>Rev 1 | Clause # 4.2 (3C)<br>&Page19,20/65 | Capacity of ash unloading equipment below main storage Silos -rotary feeders and telescopic chute are not specified. Please furnish same. '                                                                                                                                                                                                                                                                                                                                              | Bidder's scope.                                                                                                                                                                                                                                                                                                                                                                    |
| 5 | Enquiry Specifications<br>Rev 1 | Clause #4.6<br>&Page47,48/65       | Following equipment is not in bidders scope. Item 02 PUMPS -BA slurry, BAHP water, BALP water, FA water, Flushing water,Economiser ash water<br>Item 03 Compressors -First stage Compressors, Second stage Compressors, IA compressors as required to complete the system. Please advise the basis like minimum requirement of discharge, m3/h and head MWC (if already available / committed from your end), which can help us to derive Auxiliary power consumption for the equipment. | Bidder's scope.                                                                                                                                                                                                                                                                                                                                                                    |
| 6 | Enquiry Specifications<br>Rev 1 | General                            | Aeration of MDS, SCR and ESP hoppers has not been specified, however we recommend the same. Please confirm                                                                                                                                                                                                                                                                                                                                                                               | Bidder's scope.                                                                                                                                                                                                                                                                                                                                                                    |
| 7 | Enquiry Specifications<br>Rev 1 | General                            | Scope of cooling water pumps for BA hopper refractory cooling, IA, CA and TA compressors has not been stipulated in either inbidder's scope or BHEL list of exclusions. Please confirm scope of supply of these pumps                                                                                                                                                                                                                                                                    | Water will be provided at two points (3-3.5 bar) and not as mentioned in Annexure-8. ( i.e one near boiler area and ONE NEAR Ash water pump house). Exact location will be informed during detailed engineering stage. The Quantity of water should not exceed the Quantity mentioned in Annexure-8. Any booster pump requird to meet the requirements shall be in bidder's scope. |
| 8 | Enquiry Specifications<br>Rev 1 | General                            | Annexure-19 does not relate much to AHP. Please if the same has to be filled and submitted by AHP bidder                                                                                                                                                                                                                                                                                                                                                                                 | Applicable, kindly fill in.                                                                                                                                                                                                                                                                                                                                                        |

| S. No. | SECTION OF SPECIFICATION                                   | CLAUSE No.                                                                  | DESCRIPTION                                                                                                                                                                                                                                   | Bidder's Query                                                                                                                                                                                                                                                                                                                    | BHEL Reply                                                                                                                              |
|--------|------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1.     | RFQ/NIT Header Detail                                      |                                                                             |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |
| 1.1    |                                                            | 17. Integrity pact                                                          |                                                                                                                                                                                                                                               | Please confirm that Bidder to submit the integrity pact in E-procurement platform only (along with Techno-Commercial offer), No separate hard copies is to be submitted.                                                                                                                                                          | No hard copies to be submitted in case of e-procurement                                                                                 |
| 2      | Special Conditions of Contract                             |                                                                             |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |
| 2.1    |                                                            | Cl.No. 8 Transit Insurance                                                  | In BHEL Scope                                                                                                                                                                                                                                 | Please confirm that copy of Insurance policy will be given to the successful bidder after placement of order. Also please inform the minimum value of claim amount admissible in each claim as per the Insurance policy taken by BHEL.                                                                                            | Transit insurance in BHEL scope. Details shall be provided later to successful bidder.                                                  |
| 2.2    |                                                            | Cl. No. 20. Taxes and Duties, Paragraph 2                                   | For main supply and commissioning/mandatory spares, consideration of quoted ED in evaluation shall be intimated during techno-Commercial evaluation of bids.                                                                                  | Please confirm that the bidder to indicate the Quoted ED, CST/VAT in price bid only.                                                                                                                                                                                                                                              | Yes and has to mentioned as Quoted in unpriced format                                                                                   |
| 2.3    |                                                            | Cl. No. 20. Taxes and Duties, Paragraph 3                                   | For main supply and commissioning/mandatory spares, consideration of quoted CST/VAT in evaluation shall be intimated during techno-Commercial evaluation of bids.                                                                             | Please confirm that the bidder to indicate the Quoted ED, CST/VAT in price bid only.                                                                                                                                                                                                                                              | Yes and has to mentioned as Quoted in unpriced format                                                                                   |
|        |                                                            | Cl. No. 24 Evaluation Criteria                                              | However, consideration of quoted ED / CVD and CST/VAT/SAD shall be intimated during techno commercial evaluation of bids.                                                                                                                     |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |
| 2.4    |                                                            | Cl. No. 21) Liquidated damage for shortfall in Guaranteed power consumption | In case of un-remedied shortfall in overall auxiliary power consumption as mentioned in Annexure III to SCC the vendor shall be liable to pay BHEL by way of LD for performance shortfall for each unit as stipulated                         | Please confirm that M/s BHEL will not levy LD during PG test up to 1% of the Excess auxiliary power consumption from the total guaranteed power consumption indicated during bidding stage.                                                                                                                                       | <b>Acceptable Shortfall limit</b><br><br>(+) 1.0% of the guaranteed Auxiliary Power Consumption.                                        |
|        | Enquiry Specification for Ash Handling System, Section 3.0 | Cl. No. 3.6 Guarantee tests                                                 | The bidder shall note that the difference in power consumption for every kW above this value, the price shall be loaded based on NTPC contract conditions (i.e., USD 4314 for every KW) to decide L1 bidder. The deviation acceptable is +1%. |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |
| 2.5    |                                                            | Annexure – III to SCC Guaranteed Power Consumption at Rated Capacity        |                                                                                                                                                                                                                                               | Please exclude free issue equipment from the list of items covered under guaranteed power consumption accordingly the total power consumption indicated (i.e. 6900 KW) may be revised.                                                                                                                                            | Since capacity, head / pressure is designed by AHP vendor auxiliary power consumption of all free issue items is in the scope of bidder |
| 3.     | General Conditions of Contracts                            |                                                                             |                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |
| 3.1    | Instructions to Bidder                                     | Cl. No. 1.0 – General Instructions                                          | 1.2 - The price part (Part-II) along with price copy of Annexure-II is to be submitted in a separate sealed cover along with techno-commercial offer.                                                                                         | We understand that as per NIT Part – I Techno-Commercial and Part – II Price Bid are to be submitted in the E-Procurement platform in the <a href="https://bheleps.buyjunction.in">https://bheleps.buyjunction.in</a> website only.<br><br>Kindly clarify whether Bidder to submit the Hard Copies of Techno-Commercial and Price | No hard copies to be submitted in case of e-procurement                                                                                 |
| 3.2    | Instructions to Bidder                                     | Cl. No. 2.0 Procedure for Submission & Opening of Tenders                   | PART – I : Techno-Commercial Bid<br>Comprising of Technical Offer .....PQR documents (if applicable) in five (5) sets.                                                                                                                        |                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                         |

| S. No. | SECTION OF SPECIFICATION                | CLAUSE No.                         | DESCRIPTION                                                                                                                                                                                                                                                                                                                                         | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                                                                                        | BHEL Reply                                                                                         |
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|        |                                         |                                    | PART – II : Price Bid<br>Containing Prices ..... to be submitted in original, strictly, as per Price Schedule of BHEL .....                                                                                                                                                                                                                         | Bid also.                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                    |
| 3.3    | Instructions to Bidder                  | Cl. No. 2.6 Marking on Envelopes   | 2.6.2 Both Parts - I & II shall be submitted in separate sealed covers duly superscribed as indicated above and shall be enclosed further in a main cover duly sealed and superscribed as:                                                                                                                                                          | We understand that as per NIT Part – I Techno-Commercial and Part – II Price Bid are to be submitted in the E-Procurement platform in the <a href="https://bheleps.buyjunction.in">https://bheleps.buyjunction.in</a> website only.                                                                                                                                                                                                                   | Yes, bidder to submit bids online only.                                                            |
| 3.4    | Instructions to Bidder                  | Cl. No. 2.7 Bid Submission         | 2.7.1 Tenders shall be addressed to BHEL officials by name & designation and sent to the following address:                                                                                                                                                                                                                                         | Kindly confirm bidder to submit their bid's in online only.                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                    |
| 3.5    | Instructions to Bidder                  | Cl. No. 13.0 Reverse Action        | BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder.                                                                                                                                                                                                                   | Kindly clarify whether Bidder to submit the Hard Copy of Price Bid also in addition to the online Bid submission.                                                                                                                                                                                                                                                                                                                                     | Bidder to submit bids online only.                                                                 |
| 3.6    |                                         | Cl. No. 3.0                        | Total <b>erection &amp; commissioning charges</b> including service tax should be minimum 20% (or as specified in NIT) of the total quoted package price (excluding mandatory spares but including all taxes and freight), failing which the break-up of prices shall be adjusted accordingly for ordering.                                         | Please note that in SCCC Cl. No. 18 it is specified that the Erection and Commissioning charges including service tax and cess should be at least 15% of the total contract value. Please confirm that SCC shall prevail. Also considering the high values items such as HCSD pumps, 15% value for erection component is on higher side. Hence the values of total erection & commissioning may please be reduced to 10% of the total contract value. | Kindly submit offer as per enquiry terms and conditions.                                           |
| 3.7    | General Commercial Terms and Conditions | Cl. No. 4.0 – Taxes and Duties     | Cl. NO. 4.1.2 - Excise duty paid by bidder on inputs, bought out items, raw materials and components consigned directly to site from sources other than seller/contractor's factory/works shall be included by the bidder in the quoted ceiling amount of excise duty and the same shall be payable extra at actuals limited to the ceiling amount. | Clause No. 4.1.2 specifies that Excise Duty actually incurred by Seller/ Contractor on self-manufactured items alone shall be reimbursed against documentary evidence. The same clause also specifies that excise duty on bought out items shall be included by the bidder in the quoted ceiling amount of excise duty and same shall be payable extra at actual limited to the ceiling amount.<br><br>Please clarify the discrepancy.                | Kindly refer clause no. 20 of SCC Rev.01                                                           |
|        | Special Conditions of Contract          | Cl. No. 20 – taxes and Duties      | Excise duty actually incurred by Seller/Contractor on self-manufactured items shall be reimbursed against documentary evidence.                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                    |
| 3.8    | General Commercial Terms and Conditions | Clause No. 4.2. Sales Tax/VAT      | Cl. No. 4.2.1 – Central sales tax/Value added tax shall be reimbursed only if the same is paid by the seller/contractor to the respective Govt. authorities on direct sales by the seller/contractor to the purchaser meeting all statutory requirements ..... Under the respective Central Sales Tax/Value Added Tax acts.                         | Please confirm whether the Sales Tax/VAT on Bought out items which are directly dispatched by sub vendors to the project site shall be included in the supply price or to be indicated separately. Confirm that if indicated separately same will be reimbursed.                                                                                                                                                                                      | Self manufactures and bought out items taxes are to be indicate in respective columns of price bid |
| 3.9    | General Commercial Terms and Conditions | Clause No. 5.0 Statutory Variation | Statutory Variations in Excise Duty, Service Tax and Central Sales Tax/Value Added Tax only on self-manufactured items/services rendered by vendor himself on the rates prevailing at the time of delivery/ completion in comparison to the date of offer, will be to the account of the Purchaser.                                                 | Please confirm reimbursement of statutory variation in taxes and duties for bought out items which are directly dispatched to project site by bidder's sub-contractors. Since there is no provision in Bidding/Price documents to indicate the same separately. Please confirm that the same will be applicable on approved Billing Break Up later.                                                                                                   | Shall be as per enquiry terms.                                                                     |

| S. No.    | SECTION OF SPECIFICATION                       | CLAUSE No.                                                                                                 | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                 | BHEL Reply                                                                                                                                                                                                                                       |
|-----------|------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.10      | General Commercial Terms and Conditions        | Clause No. 9.2 - Supply Packages with performance guarantee/ Demonstration test at site in vendor's scope. | Note: If the Performance Guarantee/ Demonstration Test is not conducted up to 24 months from supply completion for reasons not attributable to the vendor, then last 10% payment will be released against Bank Guarantee of an equivalent amount, valid for 12 months.                                                                                                                                                                                                                                 | Please confirm the Performance Guarantee/Demonstration test is delayed due to BHEL's free issue items last 10% payment shall be released against submission of bank guarantee.                                                                                                                                                                                                 | Noted                                                                                                                                                                                                                                            |
| 3.11      |                                                | Cl. No. 9.3 SUPPLY PAYMENT FOR TURNKEY PACKAGES (E&C IN VENDOR'S SCOPE)                                    | Sl. No. 9.3.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | a) Please confirm that bidder can opt either 85% payment or 5% + 80% payment.<br><br>b) Please confirm that for all import content payment shall be released against submission of Bill of lading instead of LR.<br><br>c) For all import content exchange variation is to be paid by BHEL (or) bidder may be allowed to either to quote in Foreign Currency. Please confirm   | a) Yes bidder can opt either.<br><br>b) Payment shall be made against submission of clean receipted LR on pro-rata basis as per enquiry terms<br><br>c) Indian bidders to quote in Indian rupee only. Vendors to absorb Exchange rate variation. |
|           | Special Conditions of Contract                 | Cl. No. 15 – Payment Terms                                                                                 | Five percent (5%) pro rata payment of total basic price (excluding taxes, duties & freight) as per approved billing schedule against approval of design documents and drawings certified by Engineering and submission of Bank Guarantee (as per the format mentioned in Annexure-IV) of equivalent value valid till completion of supply (Valid initially up to contractual completion date of supply). Design document and drawings shall be as defined for approval in the technical specification. |                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                  |
| 3.12      | General Commercial Terms and Conditions        | Clause No. 9.12                                                                                            | In case of Turnkey packages (refer clause 9.3.3 & 9.4.3), if the PG test is not conducted up to 24 months from the date of last dispatch for reasons not attributable to vendor, the last 5% payment will be released against Bank Guarantee of an equivalent amount, valid initially for 12 months and extendable till completion of PG test.                                                                                                                                                         | Please confirm the Performance Guarantee/Demonstration test is delayed due to BHEL's free issue items last 10% payment shall be released against submission of bank guarantee.                                                                                                                                                                                                 | Noted                                                                                                                                                                                                                                            |
| 3.13      | General Commercial Terms and Conditions        |                                                                                                            | Clause No. 17.0 Insurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Please confirm that copy of Insurance policy will be given to the successful bidder after placement of order. Also please inform the minimum value of claim amount admissible in each claim as per the Insurance policy taken by BHEL.                                                                                                                                         | Transit insurance is in BHEL scope.                                                                                                                                                                                                              |
| 3.14      | Annexures                                      | Annexure – I                                                                                               | Cl. No. 3.0) a) – Complete Techno-Commercial offer (in five sets)                                                                                                                                                                                                                                                                                                                                                                                                                                      | Kindly clarify whether Bidder to submit the Hard Copies of Techno-Commercial and Price Bid also in addition to the online Bid submission.                                                                                                                                                                                                                                      | Bidder to submit bids online only.                                                                                                                                                                                                               |
| 3.15      | Annexures                                      | Annexure – I                                                                                               | Cl. No. 3.0) <b>Part-II</b> (Price Bid along with Priced Annexure-II) - in a separate, properly sealed cover, in the format given by BHEL.                                                                                                                                                                                                                                                                                                                                                             | Kindly clarify whether Bidder to submit the Hard Copies of Techno-Commercial and Price Bid also in addition to the online Bid submission.                                                                                                                                                                                                                                      | Bidder to submit bids online only.                                                                                                                                                                                                               |
| <b>4</b>  | <b>PQR</b>                                     |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                  |
| 4.1       |                                                | Cl. No. 1.2                                                                                                | In such a case, the Bidder shall be required to furnish a Deed of Joint Undertaking (DJU) jointly executed by the Bidder, and the Collaborator(s)/ Associate(s) and each executant of DJU shall be jointly and severally liable to the Employer for successful performance of the relevant system, as per the format enclosed with the bidding document                                                                                                                                                | It may please be noted that HCSD pump will be sourced from proven manufacturer who is having experience and from the NTPC approved vendor. Similarly for Engineering the bidder will associate ( <b>if required</b> ) with the agency who is having relevant experience. No DJU is applicable for HCSD system. This is in line with requirements of NTPC for various projects. | No change in PQR is allowed.                                                                                                                                                                                                                     |
| <b>5.</b> | <b>Price Format – For Indigenous suppliers</b> |                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                  |

| S. No. | SECTION OF SPECIFICATION                     | CLAUSE No.                                                               | DESCRIPTION                                                                                                                                                                                                                                                             | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                     | BHEL Reply                                                                                              |
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| 5.1    |                                              |                                                                          |                                                                                                                                                                                                                                                                         | Please confirm that the amount of ED including Cess to be indicated under Column (D), VAT to be indicated under Column (E) and CST to be indicated under Column (F) are for Self Manufactured Items only are shall include Bought items as well.                                                                                                                                   | Self manufactures and bought out items taxes are to be indicate in respective columns of price bid      |
| 5.2    |                                              |                                                                          |                                                                                                                                                                                                                                                                         | Please confirm that scope of supply for mandatory spares shall be limited to the equipments in bidder's scope only. The mandatory spares required for the free issue items same shall be in BHEL's scope. Kindly confirm.                                                                                                                                                          | Noted.                                                                                                  |
| 5.3    |                                              | Sl. No. E                                                                | Receipt at site including BHEL supplied free issue items, site unloading, storage and security, in plant handling of equipment at site, erection and commissioning, final painting, PG test and up to final handing over to customer of the complete Ash handling plant | Please note that as per SCC and GCC service tax and cess for erection and commissioning are in Bidder's scope but there is no provision in the price schedule for indicating service tax for erection and commissioning. Kindly check and revise the price schedule.                                                                                                               | Provision is given under sl. No. 2 of Note in Unprice and price formats.                                |
| 5.4    |                                              | Sl. No. F                                                                | Supervision of Operation and Maintenance as per the scope of specification = 300 Shifts                                                                                                                                                                                 | Please note that in the Price Schedule under Sl. No. F Supervision of O&M is specified as 300 shifts, where as in Enquiry technical specification it is specified as 12 Months. Please clarify the discrepancy.                                                                                                                                                                    | Clause 5.2 may be followed.                                                                             |
|        |                                              | Enquiry Technical Specification, Section 4.0 Scope of Supply and Service | Cl. No. 4.5 – General Scope of Work, Bullet No. 43<br><br>Bidder should indicate "Operation & Maintenance charges" per month in their offer for total 12 Months.                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                         |
| 6      | Enquiry Specification for Ash Handling Plant |                                                                          |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                         |
| 6.1    | Section – 3.0                                |                                                                          |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                         |
| 6.1.1  |                                              | Cl. No. 3.0 Intent of Specification                                      | d) Compliance with statutory requirements and obtaining clearances from statutory authorities, wherever required for all the equipments and systems covered under the scope.                                                                                            | Kindly note that there is no statutory requirements for the ash handling system. Hence kindly explain the requirement.                                                                                                                                                                                                                                                             | If applicable, wherever required to be followed.                                                        |
| 6.1.2  |                                              | Cl. No. 3.3 Paints                                                       | The Vendor's scope of work includes supply of paints and painting of all equipments and structures as per stipulated requirements and NTPC's standard color coding scheme.                                                                                              | Please confirm that supply of paints is limited for Bidder's supplied equipments only. For free issue items the same shall be in BHEL's scope. Application of final paint on BHEL's free issue materials erected by Bidder is only to be considered by the bidder.                                                                                                                 | Both supply and Painting of all equipments/items shall be in bidder's scope of supply.                  |
| 6.1.3  |                                              | Cl. No. 3.6 Guarantee Tests                                              | Bidder shall furnish the auxiliary power consumption as per Annexure-25, <b>as separate sealed envelope along with price bid</b> so that without opening price bid, the power consumption bid can be opened.                                                            | Please confirm that bidder to submit the Price Bid and Auxiliary power consumption as per BHEL format in E-Procurement platform as per NIT. Also please clarify whether bidder to submit the Hard copy of Price Bid and Auxiliary Power consumption to M/s BHEL.                                                                                                                   | Price bid and Auxiliary power consumption to be submitted online only. No need of hard copy submission. |
| 6.1.4  |                                              | Cl. No. 3.6 Guarantee Tests                                              | Also the Bidder shall furnish equipment wise power consumption for major equipments.                                                                                                                                                                                    | Please note that equipment wise power consumption will be submitted during detailed engineering. At this stage we will furnish the total guaranteed power in the Annexure – 25 using BHEL format. Kindly confirm.<br><br>Also please note that the total guaranteed power shall be as per Shop test result as specified in the technical specification Section 7.0 and Cl. No. 7.2 | Shop test is for functional guarantee and not total aux. power consumption.                             |

| S. No.     | SECTION OF SPECIFICATION | CLAUSE No.                                                                            | DESCRIPTION                                                                                                                                                                                                                                                                                                                                          | Bidder's Query                                                                                                                                                                                                                                                                                                                                           | BHEL Reply                                                                                                                                                                                 |
|------------|--------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1. 5     |                          | Cl. No. 3.7 – Spares                                                                  | The scope of supply of Vendor includes supply of mandatory spares, start-up and commissioning spares, recommended spares (as specified below), consumable spares and other spares as required for plant erection, testing, commissioning, PG test, startup, initial operation etc.                                                                   | Please confirm that supply of Mandatory is limited to Bidder's supplied equipments only. For Free issue items the mandatory spares shall be in BHEL's scope.                                                                                                                                                                                             | Noted                                                                                                                                                                                      |
| 6.1. 6     |                          | Cl. No. 3.8 – Special Tools & tackles and Test/Measuring Equipment.                   | A list of all such special tools and tackles shall be submitted along with the offer.                                                                                                                                                                                                                                                                | Please note that no special tools and tackles are required for the proposed ash handling system. Hence kindly confirm that it shall be applicable only if required.                                                                                                                                                                                      | To meet the project requirements may be considered.                                                                                                                                        |
| <b>6.2</b> | <b>Section – 4.0</b>     |                                                                                       |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                            |
| 6.2. 1     |                          | Cl. No. 4.0 Scope of Supply and Services, paragraph - 3                               | Vendor shall include the responsibility of technical coordination (including participation in technical coordination meetings with BHEL/NTPC), finalization of drawings/ documents, submission of engineering & civil assignment drawings/ documents<br>.....approved from BHEL/ NTPC/ Consultant in time and shall plan the activities accordingly. | Confirm that the civil & structural design including preparation of construction drawings is excluded from Bidder's scope.                                                                                                                                                                                                                               | Civil & structural design including preparation of construction / Fabrication drawings is included for few structures in bidder's scope. Please refer Scope matrix – R2 Column No 4 and 5. |
| 6.2. 2.    |                          | Cl. No. 4.0 Scope of Supply and Services, paragraph - 4                               | Any additional items required for the completeness of the Ash Handling system though not explicitly mentioned in Mechanical, Electrical and C&I, <b>Civil</b> and Structural scope & Works in this specification shall also be in Bidder's scope of supply & works.                                                                                  | Since execution of civil works is excluded from Bidder's scope, additional items required with regard to civil works and free issue items may be deleted from Bidder's scope.<br><br>Also confirm that the additional items required with regard to Mechanical, Electrical and C&I scope of supply shall be limited to Bidder's scope of supply & works. | Please refer Scope matrix, Notes – Rev.2 Sl.No 6 regarding the supply of items by bidder for execution of Civil works                                                                      |
| 6.2. 3     |                          | Cl. No. 4.0 Construction Water                                                        | Construction water shall be provided at one point inside the plant and is chargeable.                                                                                                                                                                                                                                                                | Please note that in Special Conditions of Contract it is specified that contractor shall make all arrangements themselves for supply of construction water but in the technical specification Cl. No. 4.0 it is specified that the construction water will provide one (1) point chargeable basis please clarify the discrepancy.                        | Construction water shall be provided at one point inside the plant and is chargeable.                                                                                                      |
|            |                          | SCC, Cl. No. 12 Provision of facilities at site                                       | Contractor shall make all arrangements themselves for supply of construction water as well as potable water for labor and other personnel at the work site / colony.                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                            |
| 6.2. 4     |                          | Cl. No. 4.1 Design basis inputs                                                       | Sl. No. 2 Ash Distribution data<br>ESP Hoppers (including 5% for duct hoppers - MDC and SCR are bypassed).                                                                                                                                                                                                                                           | Kindly let us know the percentage of ash collected in the ESP Hoppers while the MDC and SCR system in operation.                                                                                                                                                                                                                                         | 35%                                                                                                                                                                                        |
| 6.2. 5     |                          | Cl. No. 4.1 Design basis inputs                                                       | Fly ash percentage                                                                                                                                                                                                                                                                                                                                   | Please confirm that Bidder to design the Fly ash handling system of 100% from the total ash indicated in Sl. No. 1 Fuel and Ash Quantities (i.e. Design – 208 TPH and Worst coal = 272 TPH)                                                                                                                                                              | Individual equipment to be sized as per ash data provided (Worst coal)                                                                                                                     |
| 6.2. 6     |                          | Cl. No. 4.1 – Sl. No. 2) Ash Distribution data – t/h (BMCR per boiler)                | Mechanical Dust Collector (MDC) hoppers = Design Coal – 124.8 TPH/Worst Coal – 163.2 TPH                                                                                                                                                                                                                                                             | Please note that in the Sl. No. of reference clause the total ash collection in MDC is specified as 163.2 TPH but in the same Clause page 15 of 65 it is specified as 165.54 TPH. Please clarify the discrepancy and confirm the actual ash collection rate in the MDC hoppers.                                                                          | 165.54 TPH may be considered.                                                                                                                                                              |
|            |                          | Pattern of ash collection rate in different MDC hoppers @ BMRC – WWC firing condition | Total ash collected (in 2 stream) i.e. per boiler (kg/hr) = 165540                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                            |
| 6.2. 7     |                          | Cl. No. 4.1 Design Basis and Inputs                                                   | Note: page 16 of 65<br>Bullet No. 5 –<br>a) High level ash level indicators will be in BHEL scope. However, low level Ash level indicators will be in the scope of bidder.                                                                                                                                                                           | Please confirm that necessary openings in ESP hoppers will be provided by BHEL for fixing low level indicator.                                                                                                                                                                                                                                           | Noted                                                                                                                                                                                      |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                                                   | DESCRIPTION                                                                                                                                                                                                                                                                                                | Bidder's Query                                                                                                                                                                                                                                                                                                                                | BHEL Reply                                                                                                               |
|---------|--------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 6.2. 8  |                          | Cl. No. 4.1 Design basis inputs                                                              | Sludge from Water treatment plant shall be 30-35 Cum/hr.                                                                                                                                                                                                                                                   | Please confirm that specified quantity of sludge ((i.e. 35 Cum/hr maximum) will be available continuously during Bottom ash slurry pump operation.<br><br>Also please confirm that while the Bottom ash slurry disposal pumps are not in operation, sludge disposal during that period shall be taken care by BHEL.                           | Yes<br><br>Bidder to take care of sludge evacuation.                                                                     |
| 6.2. 9  |                          | Cl. No. 4.2 System Description<br>Sl. No. 3) Dry Fly ash conveying and transportation system | xi) Conveying of fly ash from MDS, SCR, Intermediate surge hopper, APH,APH duct and eco duct hopper upto buffer hoppers, shall be with the help of eight (8) numbers (5working + 3 standby) conveying air compressors suitably sized and designed to cater to the ash evacuation requirements of one unit. | Please note that as per technical specification Cl. No. 4.2 system description the ash collected in Eco duct hoppers are conveyed to Bottom ash hopper in wet mode through flushing apparatus but in the reference clause it is specifying that Eco duct hopper ash is conveyed in dry form to buffer hopper. Please clarify the discrepancy. | Eco duct hopper ash evacuation is to bottom ash hopper is by wet mode through flushing apparatus to bottom Ash hopper.   |
| 6.2. 10 |                          | Cl. No. 4.2 System Description<br>Sl. No. 3) Dry Fly ash conveying and transportation system | xii) The ash collected in MDS hoppers, SCR hoppers and Intermediate surge hoppers shall be cooled by providing water cooling jacket. (Refer the conceptual scheme attached as 9591-101-162-POC-C-1201 REV.2)                                                                                               | Since the hopper below MDC and SCR is already provided with water cooled jacket, please check the requirement of water cooling jacket for Intermediate Surge Hoppers.                                                                                                                                                                         | Specifications to be followed.                                                                                           |
| 6.2. 11 |                          | Cl. No. 4.2 System Description<br>Sl. No. 3) Dry Fly ash conveying and transportation system | xiv) Expansion joints shall be provided in the run of ash conveying pipes of MDS & SCR.                                                                                                                                                                                                                    | Kindly confirm sleeve couplings are also accepted by BHEL for dry fly ash conveying lines.<br><br>For sleeve coupling, sleeves and followers will be carbon steel, Bolts and Nuts are Galvanized and Gaskets are suitable for High temperature.                                                                                               | Shall be subject to NTPC approval and acceptance during detailed engineering stage.                                      |
| 6.2. 12 |                          | Cl. No. 4.2 System Description<br>c) Dry Fly Ash Storage System                              | ii) Pit type weigh bridge of capacity 100 Tonnes (min), shall be provided below each silos for weighment of truck during filling from silos.                                                                                                                                                               | Please check the requirement of Four (4) Nos Pit type weigh bridge (i.e. One (1) Number below each silo).<br>Please confirm that One (1) Number common weigh bridge can be provided for Four (4) numbers dry fly ash silo.                                                                                                                    | Specifications to be followed.                                                                                           |
| 6.2. 13 |                          | Cl. No. 6 – Layout Requirements                                                              | Sl. No. 3) General<br>a) Bidder shall provide grating to cover the complete sump for all sumps including sumps in the bottom ash slurry pump house, Ash water pump house, silo area and surge and setting tanks in bottom ash overflow treatment area.                                                     | Please note that for Surge and Settling tank gratings are not required. Kindly confirm that the gratings for surge and settling tanks are not applicable.                                                                                                                                                                                     | Noted.                                                                                                                   |
| 6.2. 14 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. A) Bottom ash system                                  | 1.b) Clinker grinders complete with drive motors, rails, fluid Coupling ..... required to make the system complete.                                                                                                                                                                                        | Provision of rails for Clinker crusher in water impounded bottom ash hopper is not applicable as the grinder is hung from the hopper gate and hence this requirement may be deleted.                                                                                                                                                          | NTPC specifications may be followed. Shall be subject to NTPC approval and acceptance during detailed engineering stage. |
| 6.2. 15 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. A) Bottom ash system                                  | 1.d) Only Cast Basalt lined pipes shall be supplied by BHEL                                                                                                                                                                                                                                                | Please confirm that the free issue of cast basalt lined BA Slurry conveying pipes shall be in 12 mtr. Length.                                                                                                                                                                                                                                 | Shall be supplied in lengths of 5 to 7 mtrs.                                                                             |
| 6.2. 16 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. A) Bottom ash system                                  | 2. c) MS disposal pipes for transfer of economizer hoppers ash slurry from flushing apparatus to BA hopper complete                                                                                                                                                                                        | Please confirm that the eco ash slurry conveying pipes will be of 9.52 mm thk.                                                                                                                                                                                                                                                                | NTPC specifications to be followed.                                                                                      |
|         |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. A) Bottom ash system                                  | 3. c) MS disposal pipes for transfer of economizer hoppers ash slurry from flushing apparatus to BA hopper complete                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                               |                                                                                                                          |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                             | DESCRIPTION                                                                                                                                                                                                                                                               | Bidder's Query                                                                                                                                                                                                                                                                | BHEL Reply                                                                                                                                                                                                                           |
|---------|--------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.2. 17 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. B) Dry Fly Ash Conveying System | f) Dry fly ash cast iron piping from ESP hopper outlet onwards up to buffer hoppers complete with valves, specialties, bends, spool pieces, couplings, pneumatic actuators, structural steel supports, platforms, etc.                                                    | Please check the requirement of Cast Iron pipe for Fly ash pressure conveying from ESP Hoppers to Buffer Hoppers.<br><br>If bidder to consider Cast Iron pipe please specify the pipe Class to be considered by bidder.                                                       | NTPC specifications to be followed.                                                                                                                                                                                                  |
| 6.2. 18 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. B) Dry Fly Ash Conveying System | Sl. No. B 2) Valve below air lock vessel (Seal to withstand continuous hot ash of MDS hopper approx. 250 deg. C)- 60 Nos.<br><br>Sl. No. B 3) Valve below air lock vessel (Seal to withstand continuous hot ash of SCR hopper approx. 250 deg. C)- 12 Nos.                | Please note that valve below airlock vessel (master & slave) are not applicable for our design, the same shall be provided at ash vessel inlet as per our design standard.                                                                                                    | All valves in the ash evacuation stream shall be able to withstand 250deg C minimum. All equipment shall be suitable for handling 250 deg C ash. Shall be subject to NTPC approval and acceptance during detailed engineering stage. |
| 6.2. 19 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. B) Dry Fly Ash Conveying System | Sl. No. 4) APH Hopper & Duct Hopper (Technical specification of NTPC as specified for equipments for ESP ash conveying shall be applicable) All ash conveying equipment and pipes shall be suitable to withstand continuous hot ash of 250 deg. C and properly insulated. | Please note that in the technical specification Cl. No. 4.1, in Additional information the temperature of ash in APH and AH-ESP Duct Hopper it is indicated as 150 Deg C only. Please check and confirm the actual ash temperature in APH and AH-ESP duct hoppers.            | 150 deg C to be followed.                                                                                                                                                                                                            |
| 6.2. 20 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. B) Dry Fly Ash Conveying System | 5.a) Intermediate surge hoppers each complete with supporting steel structures, stairs, platforms, aeration system, heater, blowers, primary collector, and secondary collector (if applicable) along with bag filter etc. or target box to handle ash of 250 deg. C.     | Please clarify the storage time (or) capacity of Intermediate surge hoppers to be considered by bidder.                                                                                                                                                                       | 30 min storage with continuous evacuation                                                                                                                                                                                            |
| 6.2. 21 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. B) Dry Fly Ash Conveying System | 5.e) Water cooling jacket for intermediate Surge Hopper                                                                                                                                                                                                                   | Please clarify the requirement of water cooled jacket for Intermediate surge hopper.                                                                                                                                                                                          | Water cooling jacket required as per NTPC.                                                                                                                                                                                           |
| 6.2. 22 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. 6) Common Equipment             | a.i) conveying air compressor = Air dryer, air receiver and all associated equipment suitable for pressure conveying of ash from ESP, MDS, SCR, APH and ESP-DUCT to buffer hopper.                                                                                        | Please clarify the type of air dryer to be considered by bidder.                                                                                                                                                                                                              | Shall be as per NTPC specifications.                                                                                                                                                                                                 |
| 6.2. 23 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. 6) Common Equipment             | a.i) conveying air compressor = Conveying air compressors with drive and base frame shall be supplied by BHEL                                                                                                                                                             | Please confirm that base frames, couplings, coupling guards, Matching Flanges, skid mounted instruments, control panels and com boxes required for 1 <sup>st</sup> Stage Conveying air compressors <b>along with after cooler</b> as applicable are included in BHEL's scope. | Only compressor with base frame, couplings, and motor will be supplied by BHEL as free issue items.                                                                                                                                  |
|         | <b>Annexure – 31</b>     | Mechanical Scope Matrix                                                | Sl. No. 4. F 1 <sup>st</sup> Stage Conveying air compressors and motors                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                      |
| 6.2. 24 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. 6) Common Equipment             | a.iii) Pendant controlled electrically operated overhead travelling crane for conveying air compressor house as specified complete with runway rails, necessary rail clamps, bolts, splice bars and stops for each of the runway (if applicable).                         | Please confirm that Crane girder will be in BHEL's scope. Bidder's scope is limited to supply of cranes & crane rails only.                                                                                                                                                   | Crane rails and crane Girders supporting rail are in the scope of Bidder                                                                                                                                                             |
| 6.2. 25 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. 6) Common Equipment             | h) Monorails and hoists for Buffer hopper aeration blowers and its drives located near ESP.                                                                                                                                                                               | Please confirm that the bidder's scope is limited to supply of Electric Hoist and Two (2) Nos Manual Hoist only. All required supporting structures and crane beam/Rail are excluded from bidder's scope. Please confirm.                                                     | Structural works for supporting the hopper is in the scope of BHEL. Please refer Scope matrix Sl.no D and Column No 6. However Crane rails and crane Girders                                                                         |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                                               | DESCRIPTION                                                                                                                                                                                                                                                 | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                                                       | BHEL Reply                                                                                                                                             |
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|         |                          |                                                                                          |                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                      | supporting rail are in the scope of Bidder                                                                                                             |
| 6.2. 26 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | b) Pipes [Straight length] from buffer hopper outlet up to either top entry of HCSD or top entry of Fly Ash Silo will be supplied by BHEL.                                                                                                                  | Please confirm that the free issue pipes shall be in 12 mtr. Length.                                                                                                                                                                                                                                                                                                                                                 | Will be supplied in lengths from 5 mtrs to 6 mtrs.                                                                                                     |
| 6.2. 27 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | c) Fly ash Storage Structural steel Silos with supports, platforms and staircases will be supplied by BHEL.                                                                                                                                                 | Please clarify the scope of Gratings, Hand rails, Interconnection platforms and Pipe raising structure in Fly ash silo area.                                                                                                                                                                                                                                                                                         | Please refer Scope matrix – R2 Sl.No G Column 6. However any structural rack required for raising the pipe along the shell height is not in BHEL scope |
| 6.2. 28 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | d) Pit type weigh bridge one below each fly ash storage silo complete with all electrical, controls, civil and structural works for weighment of trucks during filling from silos.                                                                          | Since complete civil works are excluded from Bidder's scope. Please confirm that the complete civil works, ramp for weigh bridge below Fly ash silo are excluded from bidder's scope.<br><br>Please check the requirement of Four (4) Nos Pit type weigh bridge (i.e. One (1) Number below each silo). Please confirm that One (1) Number common weigh bridge can be provided for Four (4) numbers dry fly ash silo. | Civil Works for the Weigh bridge pit and ramp will be provided by BHEL.<br><br>No of Pits required to be taken care by PE-Mechanical                   |
| 6.2. 29 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | 2) Transport air compressor house<br>a) Refrigerant type air dryer (if applicable) along with accessories as specified and as required for Transport Air Compressor.                                                                                        | Please note that for our system Air dryer is not required, hence the same is not applicable for us. Please confirm that the same is only applicable as per bidder design standard.                                                                                                                                                                                                                                   | Follow NTPC Specification. Shall be decided during detailed engineering stage.                                                                         |
| 6.2. 30 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | 2) Transport air compressor house<br>a) Transport air compressors with drive and base frame shall be supplied by BHEL                                                                                                                                       | Please confirm that base frames, couplings, coupling guards, Matching Flanges, skid mounted instruments, control panels and com boxes required for Transport air compressors <b>along with after cooler as applicable</b> are included in BHEL's scope.                                                                                                                                                              | Only compressor with base frame, couplings, and motor will be supplied by BHEL as free issue items.                                                    |
|         | <b>Annexure – 31</b>     | Mechanical Scope Matrix                                                                  | Sl. No. 5. B) 2 <sup>nd</sup> Stage Transport air compressors with drive motors                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                        |
| 6.2. 31 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | 2) Transport air compressor house<br>c) BHEL shall supply Instrument air compressors with motors and base frame.                                                                                                                                            | Please confirm that the all motors along with base frames couplings, coupling guards, Matching Flanges and skid mounted instruments and control panels required for Instrument Air Compressors <b>along with after cooler as applicable</b> are included in BHEL's scope.                                                                                                                                            | Only compressor with base frame, couplings, and motor will be supplied by BHEL as free issue items.                                                    |
|         | <b>Annexure – 31</b>     | Mechanical Scope Matrix                                                                  | Sl. No. 5. D) Instrument air compressors with drive motors                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                        |
| 6.2. 32 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. II) Dry Fly ash transportation and storage system | 2) Transport air compressor house<br>g) Pendant controlled overhead travelling crane each in transport air compressor house ..... as specified complete with run way rails, necessary rail clamps, bolts, splice bars and end stops for each of the runway. | Please confirm that Crane girder will be in BHEL's scope. Bidder's scope is limited to supply of cranes & crane rails only.                                                                                                                                                                                                                                                                                          | Crane rails and crane Girders supporting rail are in the scope of Bidder                                                                               |
| 6.2. 33 |                          | Cl. No. 4.4 Scope of Supply                                                              | 1) 1 <sup>st</sup> Stage Pressure Conveying system<br>ii) IACs are to be placed in CAC Building.                                                                                                                                                            | Since there is a discrepancy in the location of IAC in the two clauses. Please clarify the location of Instrument air compressors.                                                                                                                                                                                                                                                                                   | IAC shall be provided in CAC ,TAC and Silo area.                                                                                                       |
|         |                          |                                                                                          | 2) Transport air compressor house<br>c) IACs are to be placed in TAC Building.                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                        |
| 6.2. 34 |                          | Cl. No. 4.4 Scope of Supply                                                              | 2) Transport air compressor house<br>d) All interconnecting compressed air pipelines complete with valves, spool pieces, fittings, pipe rack and                                                                                                            | Please confirm that design, supply and erection of complete pipe racks for the ash handling system are excluded from bidders scope as per Sl. No. L.1, L.2 and L.3 of ..... General Scope                                                                                                                                                                                                                            | Mechanical GA drawing of pipe rack is in bidder's scope.                                                                                               |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                   | DESCRIPTION                                                                                                                                                                                                            | Bidder's Query                                                                                                                                                                                                                                                                                   | BHEL Reply                                                                                                                                                |
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|         |                          |                                                              | supporting steel structure.                                                                                                                                                                                            | matrix for AHP. (Mechanical and Civil)                                                                                                                                                                                                                                                           |                                                                                                                                                           |
| 6.2. 35 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | I) Bottom ash disposal system<br>1) Only MS Pipes shall be supplied by BHEL.                                                                                                                                           | Please confirm that the free issue ash slurry disposal pipes shall be in 12 mtr. Length.                                                                                                                                                                                                         | Will be supplied in lengths from 6 mtrs to 12 mtrs.                                                                                                       |
| 6.2. 36 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | I) Bottom ash disposal system<br>6) Alloy Cast Iron liners for lining the Bottom ash slurry sumps.                                                                                                                     | Please confirm that Bidder to supply ACI liner in ash slurry sump at slurry impingement surfaces only.                                                                                                                                                                                           | NTPC specifications to be followed.                                                                                                                       |
| 6.2. 37 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | 8) Pendent controlled electrically operated overhead traveling crane as specified complete with runway rails, necessary rail clamps, bolts, splice bars and stops for each of the runway.                              | Please confirm that Crane girder will be in BHEL's scope. Bidder's scope is limited to supply of cranes & crane rails only.                                                                                                                                                                      | Crane rails and crane Girders supporting rail are in the scope of Bidder                                                                                  |
| 6.2. 38 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | II) High Concentration Slurry Disposal System (HCSD)<br>2) HCSD Structural steel Silos with supports, platforms and staircases will be supplied by BHEL.                                                               | Please clarify the scope of Gratings, Hand rails, Interconnection platforms and Pipe raising structure in HCSD silo area.                                                                                                                                                                        | Please refer Scope matrix – R2 “ SI.No F & column No 6. However structural rack required for raising the pipe along the shell height is not in BHEL scope |
| 6.2. 39 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | II) High Concentration Slurry Disposal System (HCSD)<br>9) Fly ash mixing tank/retention tank with motor operated mixers and other accessories ..... etc from HCSD Silos up to HCSD Pump.                              | Please clarify the Type and scope of density meter for HCSD system.                                                                                                                                                                                                                              | NTPC specifications to be followed.                                                                                                                       |
| 6.2. 40 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | II) High Concentration Slurry Disposal System (HCSD)<br><br>13) Electrical/Manual hoist in HCSD silo area as specified and as required                                                                                 | Please confirm that the bidder's scope is limited to supply of Electric/Manual Hoist only. All required supporting structures and crane beam/Rail are excluded from bidder's scope.                                                                                                              | Crane rails and crane Girders supporting rail are in the scope of Bidder                                                                                  |
| 6.2. 41 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | 10) High concentration slurry disposal (HCSD) pump.                                                                                                                                                                    | Please clarify the scope of Charge Pump, Loop Pump, Hose Pump, Strainer and Valves in the HCSD line. Since the same is not specified in the specification.                                                                                                                                       | Total system for HCSD including supply, testing, erection, commissioning and handover will be in bidder's scope.                                          |
| 6.2. 42 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | 10) High concentration slurry disposal (HCSD) pump.                                                                                                                                                                    | Please confirm that bidder scope is limited to supply of HCSD pump with suction and discharge flange only. Matching flange and HCSD pipe are in BHEL's scope.                                                                                                                                    | Total system for HCSD including supply, testing, erection, commissioning and handover will be in bidder's scope.                                          |
| 6.2. 43 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | 11) Necessary actuator operated slurry duty valves of proven design in suction and discharge of HCSD pumps as per requirement of the system                                                                            | As per SLFD: Drg. No. 9591-101 POM-A-029, No valve has been shown at discharge end of HCSD pump. Please note that, each HCSD pump is having individual discharge pipe line and there is no inter connection between the lines, Hence the valve at discharge end is not required. Please confirm. | Total system for HCSD including supply, testing, erection, commissioning and handover will be in bidder's scope.                                          |
| 6.2. 44 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | II) High Concentration Slurry Disposal System (HCSD)<br><br>14_ a) All accessories and equipment required for interconnection of these pumps with the system will be in bidder's scope for making the system complete. | Please note that there is no interconnection of these pumps as per flow diagram. Hence the same is not applicable for bidder and the clause may be deleted. Also please note that dedicated slurry pipe line will be provided for each pump as per specification.                                | Total system for HCSD including supply, testing, erection, commissioning and handover will be in bidder's scope.                                          |
| 6.2. 45 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System | II) High Concentration Slurry Disposal System (HCSD)<br>b) Vertical sump drainage pumps along with drive motor and accessories for main storage silo area to pump the                                                  | Please note that since the drain pump is located in HCSD silo area the ash dyke is too far from the HCSD silo area hence the drain water from the HCSD silo area drain sump will be                                                                                                              | Bidder to decide. Shall be decided during detail engineering.                                                                                             |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                                                                      | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                     | Bidder's Query                                                                                                                                                                                                                                                                                                                                                          | BHEL Reply                                                                                                                                                                                    |
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|         |                          |                                                                                                                 | accumulated ash water to the ash slurry sump of bottom ash slurry disposal pump house or to dyke including piping along with necessary valves, bends, spool pieces, fittings, supports, etc. as specified and as required.                                                                                                                                                                                      | discharged in to BA slurry sump or to surge and settling tank. Kindly confirm.<br><br>Also please note that designing of drain pump with two (2) conditions (i.e, drain pump discharge into slurry sump or to dyke) is not possible.                                                                                                                                    |                                                                                                                                                                                               |
| 6.2. 46 |                          | Cl. No. 4.4 Scope of Supply<br>c) Ash Slurry Disposal System                                                    | II) High Concentration Slurry Disposal System (HCSD)<br><br>15_ c) Pendant controlled overhead travelling crane each in <b>transport air compressor house</b> to handle the equipment in the transport air compressor house, as specified complete with run way rails, necessary rail clamps, bolts, splice bars and end stops for each of the runway.                                                          | Please confirm that the crane proposed is for HCSD pump house the description specified i.e. Transport air compressor shall be corrected.<br><br>Also please confirm that Crane girder will be in BHEL's scope. Bidder's scope is limited to supply of cranes & crane rails only.                                                                                       | Yes, this is requirement for HCSD pump house.<br><br>Crane rails and crane Girders supporting rail are in the scope of Bidder                                                                 |
| 6.2. 47 |                          | Cl. No. 4.4 Scope of Supply<br>D) Ash Water tanks and Pumps, Ash water pump house, Water Piping and Accessories | 1) The ash water pumps namely Bottom ash LP water, Bottom ash HP water, Fly ash water, Flushing water pump for BA disposal system, Economizer ash water pumps shall be supplied by BHEL and all necessary piping, interconnections, fittings etc. to make the system complete will be in the scope of the bidder. The pumps being supplied by BHEL will be supplied along with drive and foundation bolts only. | Please confirm that the Base frames, matching flanges, couplings and coupling guards etc for the Free issue pumps will be in BHEL's scope.                                                                                                                                                                                                                              | Refer Annexure no: 35.                                                                                                                                                                        |
| 6.2. 48 |                          | Cl. No. 4.4 Scope of Supply<br>D) Ash Water tanks and Pumps, Ash water pump house, Water Piping and Accessories |                                                                                                                                                                                                                                                                                                                                                                                                                 | Please confirm that the scope of Pipe sleeves in the ash water pump house is excluded from Bidder's scope.                                                                                                                                                                                                                                                              | Should be in bidder's scope only.                                                                                                                                                             |
| 6.2. 49 |                          | Cl. No. 4.4 Scope of Supply<br>Sl. No. 7) Bottom Ash Overflow Water System                                      | a) Bottom ash over flow water tanks including weirbox, instruments, its structural steel supports and all accessories.                                                                                                                                                                                                                                                                                          | Please confirm that complete BA overflow tanks including weirbox, instruments, supporting steel and accessories required for BA overflow tank are excluded from Bidder's scope of work. Bidder's scope is limited to supply of BA overflow pump and overflow pipes.<br><br>Also please confirm that pipe sleeve in BA overflow tank and it welding are in BHEL's scope. | Only the overflow tank with structural supports will be supplied by BHEL as free issue item. All other items and accessories required for completion of the system will be in bidder's scope. |
|         |                          | Annexure – 31, Mechanical Scope matrix R1                                                                       | Bottom ash overflow tank with supports.                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                               |
| 6.2. 50 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 8                                                              | Bidder shall ensure the correctness of civil assignment drgs which shall be an input for BHEL's civil design agency & structural design package bidder.                                                                                                                                                                                                                                                         | Please confirm that the civil & structural design including preparation of construction drawings is excluded from Bidder's scope.                                                                                                                                                                                                                                       | Please refer Scope matrix R2. Column No 4 and 5                                                                                                                                               |
| 6.2. 51 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 1                                                              | c) Bidder shall furnish pressure drop calculation for HCSD system in the offer.                                                                                                                                                                                                                                                                                                                                 | Please note that HCSD pump pressure drop calculations will be provided during detailed engineering stage. Kindly confirm                                                                                                                                                                                                                                                | Noted                                                                                                                                                                                         |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                          | DESCRIPTION                                                                                                                                                                                                                                                                                                               | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                       | BHEL Reply                                                                                                                                                                                                                                                                       |
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| 6.2. 52 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 10 | 1) Clarified water will be provided at one point either near to Unit 1 or Unit 2 for sealing of slurry pumps, clinker grinder, BA overflow pumps etc.                                                                                                                                                                     | Please note that in the NTPC flow diagram Dwg No. 9591-101-POM-A-025, Rev. A under Note 9 it is specified that seal water pump for sealing of BA overflow pumps and Clinker grinder are to be located in Unit # 1 boiler area. Hence kindly confirm that clarified water required for above seal water pump shall be provided by BHEL @ min 35 MWC pressure in unit # 1 boiler area. | Specifications may be followed.                                                                                                                                                                                                                                                  |
| 6.2. 53 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 10 | Design and layout of all buildings is in the scope of successful bidder.                                                                                                                                                                                                                                                  | Please confirm that Bidder's scope is limited to Mechanical Design and layout of buildings.                                                                                                                                                                                                                                                                                          | Please refer Scope matrix R2. Column 4 and 5                                                                                                                                                                                                                                     |
| 6.2. 54 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 13 | Inspection windows shall be provided at suitable locations.                                                                                                                                                                                                                                                               | Please elaborate this requirement.                                                                                                                                                                                                                                                                                                                                                   | As per NTPC requirement.                                                                                                                                                                                                                                                         |
| 6.2. 55 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 14 | All access/maintenance platforms (hand rails / toe guard) including provision of secondary structural supports at any level as applicable for operation/maintenance of ash handling equipment are in bidder's scope.                                                                                                      | Please elaborate this requirement.                                                                                                                                                                                                                                                                                                                                                   | Specifications to be followed.                                                                                                                                                                                                                                                   |
| 6.2. 56 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 15 | <b>Structural Steel Fly Ash Silo and HCSD Silo shall be supplied by BHEL as free issue to bidder.</b> However the bidder has to consider all necessary equipments, mountings, accessories, fittings etc. in the scope for making the system complete in all respects.                                                     | Please confirm whether raw steel will be supplied or Fabricated steel will be supplied by BHEL for HCSD silo and Fly ash silo as free issue.                                                                                                                                                                                                                                         | MS pre fabricated Silo's will be supplied to site by BHEL. Necessary SS liners need to be fixed by Bidder. Please refer Scope matrix SI.No G, Column No 6 and Notes SI.No 2                                                                                                      |
| 6.2. 57 |                          | Cl. No. 4.5 – General Scope of Work—Bullet No. 16   | Maintenance platform of minimum one meter width with handrails and access ladders shall be provided below hoppers of economizer. Economizer duct, MDS, SCR, APH and APH-Duct and all around BA hopper. Supports (up to 40MT steel) for the same to be taken from the Boiler building shall be included in bidder's scope. | Since platforms are already provided below economizer, Economizer Duct and Fly ash hoppers at various levels, no additional platform will be required for ash handling system. Hence this clause may be deleted.<br><br>Further we requesting you to kindly furnish the Boiler GA and Elevation drawing.                                                                             | Structural works for supporting Economizer duct, MDS, APH and APH-Duct and all around BA hopper, including platforms, ladder, handrails, gratings & Cheq. Plates are in Bidders scope. Including handling of hopper arrangement is in the scope of Bidder. Refer Scope matrix R2 |
| 6.2. 58 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No.18  | Facilities for carrying out online and off-line maintenance of Ash Handling System and auxiliaries shall be provided. In general, this should include adequate handling equipment, working space, platforms and safety devices.                                                                                           | Please elaborate this requirement as the same is not clear.                                                                                                                                                                                                                                                                                                                          | Shall be as per NTPC specifications.                                                                                                                                                                                                                                             |
| 6.2. 59 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 19 | All pipe joints inside pump houses shall be flange type with suitable gaskets.                                                                                                                                                                                                                                            | Confirm that this requirement is only for the Ash Slurry disposal pipes within the Ash Disposal Pump House. Also confirm that supply of flanged pipes is excluded from Bidder's scope.                                                                                                                                                                                               | All pipe joints in all pump houses shall be in bidder's scope only and the type shall be decided during detailed engineering stage alongwith NTPC.                                                                                                                               |
| 6.2. 60 |                          | Cl. No. 4.5 – General Scope of Work-- Bullet No. 31 | SS liners for hoppers and Silos such as HCSD Silos, Fly ash silos etc... shall be in bidder's scope.                                                                                                                                                                                                                      | Please clarify the MOC and Thickness of SS liners for Intermediate surge hopper and Buffer Hopper. Also please confirm that the liner shall be provided at conical bottom portion up to max 1 Mtr height only from the bottom. Kindly confirm<br><br>Also please confirm that for HCSD Silo and Dry Fly ash silo                                                                     | Shall be as per NTPC specifications.                                                                                                                                                                                                                                             |

| S. No.  | SECTION OF SPECIFICATION       | CLAUSE No.                                                                                                            | DESCRIPTION                                                                                                                                                                                                                                                                   | Bidder's Query                                                                                                                                                                                                                                                            | BHEL Reply                                                                                                                                  |
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|         |                                |                                                                                                                       |                                                                                                                                                                                                                                                                               | bidder to supply 3mm thk. SS 409M liner at conical bottom portion up to max 1 Mtr height only from the bottom. Kindly confirm                                                                                                                                             |                                                                                                                                             |
| 6.2. 61 |                                | Cl. No. 4.5 – General Scope of Work-- Bullet No. 35                                                                   | Base frames and all mounting hardware including bolts and nuts for all equipments & electrical panels and for associated motors shall be in the scope of Bidder.                                                                                                              | Please confirm that supply of base frames, Foundation bolts and all mounting hardware's including Bolts and nuts for free issue items are in BHEL's scope.                                                                                                                | supply of base frames, Foundation bolts and all mounting hardware's including Bolts and nuts / all fasteners are in Bidders scope for all   |
| 6.2. 62 |                                | Cl. No. 4.5 – General Scope of Work-- Bullet No. 41                                                                   | Supply and Erection of Electro forged gratings in pipe racks, all type of sumps, walkways, platforms and any other structural steel works of Ash handling system shall be in bidder's scope (refer Scope matrix).                                                             | Please note that since the design, supply and erection of complete Pipe rack is excluded from Bidder's scope, hence supply and erection of Electro forged gratings in pipe racks are also to be excluded from bidder's scope. Kindly confirm.                             | Supply and erection of Electro forged gratings in pipe rack walk ways only is in BHEL scope. Please refer Scope matrix R2. L.2 Column No 6. |
| 6.2. 63 |                                | Cl. No. 4.5 – General Scope of Work-- Bullet No. 45                                                                   | Bidder should indicate "Operation & Maintenance charges" per month in their offer for total 12 Months.                                                                                                                                                                        | Please note that in the technical specification Cl. No. 5.2 and in Price Schedule under Sl. No. F Supervision of O&M is specified as 300 shifts, where as in Enquiry technical specification in Cl. No. 4.5 it is specified as 12 Months. Please clarify the discrepancy. | Clause 5.2 of the specifications may be followed.                                                                                           |
|         |                                | Cl. No. 5.2 Operation And Maintenance Till Handing Over<br>A) Scope of work for operation & Maintenance of the Plant: | The bidder shall be responsible to carry out the "round the clock trouble free operation" of the complete Ash Handling System (DCS based) related to all the units for a period of 300 shifts during initial coal firing period, COD, Trial operation and up to handing over. |                                                                                                                                                                                                                                                                           |                                                                                                                                             |
| 6.2. 64 |                                | Cl. No. 4.5 – General Scope of Work-- Bullet No. 46                                                                   | The Vendor has to quote for the following Manpower with Toolkit for BHEL use.<br><b>Manpower details:</b><br>1) Skilled (e.g., welder, fitter, rigger etc.) – 30 Man days<br>2) Unskilled – 120 Man days<br>Each man-day shall be 8hours in a day.                            | Please elaborate this requirement. Also please note that minimum continuous period of these labors will be engaged.<br><br>Please clarify whether bidder to consider each skilled labour (e.g welder, fitter, rigger etc) for 30 man days or total 30 man days.           | Total 30 man days for skilled labour.                                                                                                       |
| 6.2. 65 |                                | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 5                                                              | Statutory Clearance: Bidder shall obtain all the statutory clearances along with required fees to be remitted. BHEL may extend necessary assistance to the extent possible in this regard.                                                                                    | Kindly note that there are no statutory requirements for the ash handling system. Hence kindly explain the requirement.                                                                                                                                                   | As per requirements.                                                                                                                        |
| 6.2. 66 |                                | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 8                                                              | Comprehensive L-2 list of sub-vendors shall be submitted along with the offer and the same shall be submitted to NTPC for approval.                                                                                                                                           | Please note that L2 schedule for the proposed ash handling system will be submitted after award of contract as per Cl. No. 35 of SCC. Kindly confirm.                                                                                                                     | Noted.                                                                                                                                      |
|         |                                | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 10                                                             | Bidder shall furnish the L-2 project schedule indicating various milestones and constraints in MS PROJECT / PRIMAVERA, along with the bid.                                                                                                                                    |                                                                                                                                                                                                                                                                           |                                                                                                                                             |
|         | Special Conditions of Contract | Cl. No. 35 Project Management                                                                                         | L2 Schedule to be submitted by vendor within 10 days of LOI                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                           |                                                                                                                                             |
| 6.2. 67 |                                | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 12                                                             | Supply of MS pipes and MS ERW/Cast Iron pipes are under the scope of BHEL ISG. All pipe bends, spool pieces, flanges and fitting accessories as per requirement based on plant layout shall be in Bidder's scope.                                                             | Please confirm that all the Free issue pipes shall be in 12 Mtr lengths.<br><br>Also please clarify whether the pipes shall be provided with plain end or flanged ends.                                                                                                   | Will be supplied in lengths of 5- 7 mtrs. Pipes will be supplied with plain ends.                                                           |

| S. No.  | SECTION OF SPECIFICATION | CLAUSE No.                                                | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                        | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | BHEL Reply                                             |
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| 6.2. 68 |                          | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 13 | The pipe data sheet and calculations for detailed Pipe sizing as per system design shall be furnished by bidder along with the offer for customer approval.                                                                                                                                                                                                                        | Please note that the pipe data sheets and calculations for detailed pipe sizing will be provided during detailed engineering after award of contract for Customer approval. Kindly confirm.                                                                                                                                                                                                                                                                                     | Noted.                                                 |
| 6.2. 69 |                          | Cl. No. 4.5 – General Scope of Work – Note: Bullet No. 14 | List of drawings/documents required along with the offer :                                                                                                                                                                                                                                                                                                                         | Please note that the detailed calculation for the proposed ash handling system, for pipes etc will be furnished during detailed engineering only. Kindly confirm.                                                                                                                                                                                                                                                                                                               | Noted.                                                 |
| 6.2. 70 |                          | Cl. No. 4. 6 – Exclusions Sl. No. 2                       | a) BA Slurry transportation pumps along with motor and couplings.                                                                                                                                                                                                                                                                                                                  | Please clarify the scope of Fluid Coupling and Gear box for 1 <sup>st</sup> stage ash slurry disposal pumps, V-belts and pulleys for 2 <sup>nd</sup> stage ash slurry disposal pumps. Also please clarify the scope of Base frames, foundation bolts, couplings, pulleys and drive guards                                                                                                                                                                                       | Please refer Annexure-35. List of free issue items.    |
| 6.2. 71 |                          | Cl. No. 4. 6 – Exclusions Sl. No. 3                       | The following compressors and their mandatory spares shall not be in the scope of vendor:-<br>a) 1 <sup>st</sup> stage fly ash conveying air compressors<br>b) 2 <sup>nd</sup> stage fly ash transport air compressors<br>c) Instrument air compressors as required for the system to be complete.                                                                                 | Please confirm that Motors, base frames, couplings, coupling guards, Matching Flanges, skid mounted instruments, control panels and com boxes required for these air compressors along with after cooler as applicable are included in BHEL's scope.                                                                                                                                                                                                                            | Please refer Annexure-35. List of free issue items.    |
| 6.2. 72 |                          | Cl. No. 4.7 – Terminal Points                             | e) <b>Effluent from DM plant/CPU and Sludge:-</b> NTPC shall terminate One no. of sludge connection, one no. effluent connection from DM Plant and One no. effluent connection (from CPU) for further connection to ash slurry sump, near the TP location - marked 'C' as identified in the GLP at an approximate elevation of (+) 8 m above local grade level.                    | Please specify the total flow in cum/hr to be considered by bidder to design the ash slurry disposal pump by considering this inflow.<br><br>Also please confirm that the adequate pressure is available at terminal point for further flow in to the ash slurry sump.                                                                                                                                                                                                          | As per specifications.                                 |
| 6.2. 73 |                          | Cl. No. 4.9 – General Noted to Bidders Bullet No. 4       | The bid shall also include Price schedules, Bidder's Qualifications, Eligibility and Conformity of the facilities, list of special Tools & Tackles. Sub-Bidders proposed by the bidder shall also be indicated.                                                                                                                                                                    | Please note that No special tools and tackles are required for our system. Hence the same is not applicable for us. Kindly confirm                                                                                                                                                                                                                                                                                                                                              | To meet the project requirements may be considered.    |
| 6.2. 74 |                          | Cl. No. 4.9 – General Noted to Bidders Bullet No. 12      | All Bidders to submit their credentials and formats attached in Technical requirements and 3K attachments along with offer in 3 sets for submission to NTPC for vendor approval.                                                                                                                                                                                                   | Please confirm that the hard copy of attachment 3K with supporting documents are to be submitted during detailed engineering period only. Kindly confirm.                                                                                                                                                                                                                                                                                                                       | Should be submitted alongwith offer in hard copy also. |
| 6.3     | <b>Section – 5.0</b>     |                                                           |                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                        |
| 6.3. 1  |                          | Cl. No. 5.1 – Erection & Commissioning                    | 1) For Erection and commissioning works and hand over of entire Ash handling plant, bidder shall depute and maintain minimum five graduate engineers (consisting of Mechanical & Electrical) in addition to Site-in-charge and two diploma engineers having requisite relevant experience till handing over of the systems to the customer, as per project requirement & progress. | Please clarify that the five (5) graduate engineers specified is common for Mechanical and Electrical or separately five (5) mechanical engineers and five (5) electrical engineers are to be deputed by bidder.<br><br>Also Please note that the erection and commissioning is in bidder's scope, required number of engineers of various disciplines to supervise the erection will be deployed based on the front availability and to meet the plant commissioning schedule. | Common                                                 |

| S. No. | SECTION OF SPECIFICATION | CLAUSE No.                                                                                                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                    | Bidder's Query                                                                                                                                                                                                                                                                                                                                                               | BHEL Reply                                                                                                                     |
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| 6.3. 2 |                          | Cl. No. 5.1 – Erection & Commissioning                                                                      | 3) During such erection work, bidder shall be responsible to ensure correct implementation of their design of civil and structural works at site.                                                                                                                                                                                                                                                                                              | Please note that since the complete civil works are excluded from bidder's scope hence the responsibility for civil works is BHEL's civil contractor. Kindly confirm. Also please note that design of Civil & structural works is excluded from bidder's scope.                                                                                                              | Please refer Scope matrix R2 for scope of Civil and Structural works and Design of Civil and structural drawings Sl.No 4 and 5 |
| 6.3. 3 |                          | Cl. No. 5.1 – Erection & Commissioning                                                                      | 6) Suitable (minimum 1 no.) minimum 50 T capacity with 100 ft. boom crawler crane & suitable torque wrench for tightening HSFG bolt /HT bolts to be mobilized for erection. Wherever required in the absence of inserts plates etc. HILTI make or any other approved anchor fasteners supply & fixing to be included in the scope of bidder.                                                                                                   | 50 T capacity 100 ft. boom crawler will not be required for ash handling equipment erection. However required Hydra cranes will be mobilized for erection. Also torque wrench if required will be mobilized during erection. Also please note that required quantity of erection tools will be deployed as per the requirement and to meet the plant commissioning schedule. | No support will be provided by BHEL during erection and commissioning stage. To be taken care of by bidder.                    |
| 6.3. 4 |                          | Cl. No. 5.1 – Erection & Commissioning<br>Note: Bullet No. 4                                                | Required water (through tankers/bore wells) for leakage testing of Bottom Ash hopper shall be arranged by bidder in the absence of service water at the nearest place, without any cost implication to BHEL.                                                                                                                                                                                                                                   | We would like to discuss this point.                                                                                                                                                                                                                                                                                                                                         | Bidder to take care of this.                                                                                                   |
| 6.3. 5 |                          | Cl. No. 5.1 – Erection & Commissioning<br>Note: Bullet No. 9                                                | Drilling of required holes in the civil & steel structures for erection of pipes, dives, equipment shall be in bidder's scope.                                                                                                                                                                                                                                                                                                                 | Since it will be difficult to drill holes on the erected structures of pipe rack, the required holes for fixing pipe clamps shall be provided by the BHEL's fabrication contractor. It will be Bidder's responsibility to provide the details of holes to BHEL in the piping layout drawings. Please confirm.                                                                | Holes in the beams will not be provided by BHEL. Bidder to make necessary arrangements                                         |
| 6.3. 6 |                          | Cl. No. 5.2 – Operation and maintenance till handing over                                                   | The bidder shall be responsible to carry out the "round the clock trouble free operation" of the complete Ash Handling System (DCS based) related to all the units for a period of 300 shifts during initial coal firing period, COD, Trial operation and upto handing over. Each shift shall be of 8 hrs. The time calculation shall be based on the coal firing time of the boiler and not on the ash evacuation time of ash handling plant. | Please confirm that the operation & maintenance supervision staff will be deputed for 300 shifts from the date of first coal firing as per technical specification Cl. No.5.2, Pg. 51 of 59. Bidder's responsibility of Operation & maintenance supervision will be limited to 300 shifts from the date of first coal firing whichever is earlier.                           | Clause 5.2 may be followed.                                                                                                    |
| 6.3. 7 |                          | Cl. No. 5.2 – Operation and maintenance till handing over<br><br>B) Additional Responsibility of the Bidder | ii) Eco Hoppers, MDS & SCR, APH Hoppers & ESP Hoppers are to be ensured empty round the clock. In case of outage of ESP field due to accumulated ash in the ESP Hoppers, it will be the responsibility of the contractor to arrange evacuation of ash from the ESP Hoppers so that generation of the units does not get affected.                                                                                                              | Please confirm that bidder's responsibility for evacuation of ash from ESP hoppers is only on account of AHP system failure.                                                                                                                                                                                                                                                 | This system is envisaged only for ash handling.                                                                                |
| 6.3. 8 |                          | Cl. No. 5.2 – Operation and maintenance till handing over<br><br>B) Additional Responsibility of the Bidder | The bidder shall be vigilant and take necessary measure to prevent overflow from slurry sumps, BAOF sump, seal water tank, ash water tank, <b>recovery water tanks</b> , drain sumps etc. to avoid discharge to the nearby drain.                                                                                                                                                                                                              | Please note that as per technical specification Cl. No. 5 water facilities Recovery water system are excluded from bidder's scope. Kindly confirm that the works related to recovery system is not applicable for the proposed system.                                                                                                                                       | Noted                                                                                                                          |
| 6.4    | <b>Section – 6.0</b>     |                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                |
| 6.4. 1 |                          | Note:<br>Bullet No. 9                                                                                       | Successful bidder shall submit "Erection & commissioning Manual" within 8 weeks from the date of LOI.                                                                                                                                                                                                                                                                                                                                          | Please note that Erection & Commissioning manual <b>if required</b> will be furnished before erection and commissioning works. Kindly confirm                                                                                                                                                                                                                                | Noted                                                                                                                          |
| 6.5    | <b>Section – 7.0</b>     |                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                |

| S. No. | SECTION OF SPECIFICATION                                                          | CLAUSE No.                                          | DESCRIPTION                                                                                                                                                | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BHEL Reply                                                                                                                                                                                                                                                                                                                                        |
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| 6.5.1  |                                                                                   | Cl. No. – 7.1 - Station Auxiliary Power Consumption | List of drives with corresponding weightage factors thereof for which power consumption is to be guaranteed is as follows:                                 | Please note that in the Annexure – III to SCC Guaranteed power consumption Instrument air compressor are not specified, but in the technical specification Section-7.0 Sheet 62 of 65 Instrument air compressors are specified. Please clarify the discrepancy.                                                                                                                                                                                                         | Amended Annexure-III to SCC is attached.                                                                                                                                                                                                                                                                                                          |
|        | Annexure – III to SCC                                                             | Guaranteed Power Consumption at Rated Capacity      |                                                                                                                                                            | Also please clarify whether bidder to consider the IA Compressors in guaranteed power consumption. If the IA compressors are to be considered by bidder then the total power consumption specified in Annexure - III to SCC (i.e. 6900 KW) shall be revised accordingly.                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                   |
| 7.0    | Annexure-31-Mechanical Scope Matrix                                               |                                                     |                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                   |
| 7.1    |                                                                                   | Sl. No.4. G                                         | Instrument air compressor with drive motor                                                                                                                 | a) Please clarify the number of IA compressors and its capacity (min if any) to consider the same quantity and capacity of air driers.                                                                                                                                                                                                                                                                                                                                  | Total 8 nos. IAC will be supplied by BHEL and it will be located in three buildings. (CAC, TAC and Silo utility building)                                                                                                                                                                                                                         |
|        |                                                                                   | Sl. No. 5. C                                        | Instrument air compressor with drive motor                                                                                                                 | b) In the technical specification Instrument Air compressors are specified in various location. Please clarify the actual number of Instrument Air compressor and its locations.                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                   |
| 8.0    | Annexure-32-General Scope matrix for AHP Telangana Project (Mechanical and Civil) |                                                     |                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                   |
| 8.1    | C. ECO/APH/MDS/ DUCT/SCR Hoppers                                                  | Sl. No. C.1                                         | Structural steel for ECO/APH/MDS/ DUCT/SCR Hoppers and its Access/Maintenance platforms at intermediate levels including platform .....Gratings, Handrails | <p>Since platforms are already provided below economizer and air pre heater hoppers at various levels, no additional platform will be required for ash handling system. Hence this clause may be deleted.</p> <p>Further we requesting you to kindly furnish the Boiler GA along with Elevation drawing.</p>                                                                                                                                                            | <p>Structural works for supporting Economizer duct, MDS, APH and APH-Duct and all around BA hopper, including platforms, ladder, handrails, gratings &amp; Cheq. Plates are in Bidders scope. Including handling of hopper arrangement is in the scope of Bidder. Refer Scope matrix R2.</p> <p>PE- Mechanical to clarify regarding Boiler GA</p> |
| 8.2    |                                                                                   | Sl. No. C.3                                         | Civil Foundation for the Hopper supporting floors for above Eco/APH/MDC/SCR /Duct hoppers.                                                                 | Please confirm that the civil design for the hopper supporting floors for Eco/Eco Duct/APH/MDC/SCR/APH/Duct hoppers civil design is excluded from Bidder's scope.                                                                                                                                                                                                                                                                                                       | Civil designs are not included in bidder's scope. Please refer Scope matrix – R2.Sl.No C.3 – Column 5                                                                                                                                                                                                                                             |
| 8.3    |                                                                                   | Sl. No. L                                           | Pipe Rack                                                                                                                                                  | Please confirm that all pipe racks for ash handling system from boiler area/ESP area to various buildings, silos, ash pond and including road/rail crossings are in BHEL's scope. Also confirm that all types of culverts are in BHEL's scope. Bridges required, if any, Rail crossing, road crossing and nallah/river crossing if any for ash slurry disposal pipes etc. are excluded from bidders scope. Confirm that Hume pipes if any required are in BHEL's scope. | Please refer Scope matrix – R2.Sl.No L.2 & L.3 – Column 4 and 5. scope of Civil and Structural works and preparation of Civil and structural drawings are not in the scope of bidder.                                                                                                                                                             |
| 8.4    |                                                                                   |                                                     |                                                                                                                                                            | Please confirm that supply of foundations bolts for all BHEL's free issue material is in BHEL's scope.                                                                                                                                                                                                                                                                                                                                                                  | Scope of Supply of Foundation bolts given in scope matrix R2 - Column 6.                                                                                                                                                                                                                                                                          |
| 8.5    |                                                                                   |                                                     |                                                                                                                                                            | Please confirm that insert plates, Pipe sleeves in various areas are excluded from Bidder's scope                                                                                                                                                                                                                                                                                                                                                                       | Please refer scope matrix R2, Notes Sl.No 4                                                                                                                                                                                                                                                                                                       |

| S. No. | SECTION OF SPECIFICATION                             | CLAUSE No.                                                                                          | DESCRIPTION                                                                                                                             | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                             | BHEL Reply                                                                                                           |
|--------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
|        |                                                      |                                                                                                     |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                            | and 5                                                                                                                |
| 9.0    | Annexure - 6 Tender Drawings                         |                                                                                                     |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| 9.1    |                                                      | Conceptual Scheme of Fly ash handling system (Dwg No. IS-1-CE-701-301-C001, Rev.02)                 | The Number of Compressors shown is tentative, the exact number and details of air compressor shall be submitted in a separate document. | Please clarify the actual number of conveying air compressors to be considered by bidder.                                                                                                                                                                                                                                                                                                  | During detailed engineering.                                                                                         |
| 9.2    |                                                      | Conceptual Scheme of Fly ash handling system (Dwg No. IS-1-CE-701-301-C001, Rev.02)                 |                                                                                                                                         | Please confirm that the flow diagram provided along with the tender document is indicative only. The number of Fly ash pressure conveying streams from various Fly ash hoppers to buffer hopper shall be considered as per bidder design standard.                                                                                                                                         | NTPC specifications to be followed and same to be decided During detailed engineering.                               |
| 9.3    |                                                      | Single Line Flow Diagram of Bottom Ash Handling System (Jet Pump) Ash Disposal and Ash Water System | Sludge Pump discharge into Settling & Surge Tank.                                                                                       | Please note that in flow diagram sludge pump discharge is indicated as "sludge to settling & surge tank" we request you kindly check and confirm. Normally the sludge from the settling & surge tank will be discharge in to Bottom ash slurry sump.                                                                                                                                       | Noted and confirmed.                                                                                                 |
| 9.4    |                                                      | Main Equipment Plan Dwg No. PE-DG-424-100-M002, Rev.02                                              | Conveying Air Compressor Room                                                                                                           | We understand that the 1 <sup>st</sup> stage conveying air compressor is located at coordination of 2749.50 E and 1055.02N. Kindly confirm.                                                                                                                                                                                                                                                | Noted and same shall be confirmed during detailed engineering.                                                       |
| 9.5    |                                                      | Main Equipment Plan Dwg No. PE-DG-424-100-M002, Rev.02                                              | Buffer Hopper fluidizing blower.                                                                                                        | We assume that Bidder to locate the Buffer hopper fluidizing blower near buffer hopper (1 <sup>st</sup> filed of ESP hopper). Kindly confirm.                                                                                                                                                                                                                                              | NTPC specifications to be followed.                                                                                  |
| 10.    | Annexure-3-Technical Details                         |                                                                                                     |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| 10.1   | Sub Section A-21                                     | Cl. No. 1.08.00 Data Sheet for Flushing Boxes                                                       | Liners: 8mm thk Replaceable SS liners of hardness 300-350 BHN                                                                           | Please note that Bidder will supply 400 series SS liner for Flushing apparatus and it is not hardened due to the shape and its thickness.                                                                                                                                                                                                                                                  | As per NTPC specifications.                                                                                          |
| 10.2   | Sub Section A-21                                     | Cl. No. 5.01.00 Data Sheet for HCSD slurry Disposal System                                          | Range of slurry concentration to handled by Pump = 55 to 65% by weight                                                                  | Please confirm that HCSD pump shall be designed considering design parameters of 60%. Based on the above parameters the power consumption will be calculated and measured.                                                                                                                                                                                                                 | As per NTPC specifications.                                                                                          |
| 11.    | Annexure – 35, Rev.01 Free Supply items (Mechanical) |                                                                                                     |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| 11.1   |                                                      | Sl. No. 10                                                                                          | MS pipe (Straight length only) from BA slurry pump house to ash dyke = 51000 metre                                                      | Please specify the route length and static rise to be considered by bidder for slurry pump design.                                                                                                                                                                                                                                                                                         | GLP attached.                                                                                                        |
| 11.2   |                                                      | Sl. No. 12                                                                                          | Seamless Steel Pipe (straight lengths only) For HCSD system = 102000 Metre                                                              | Please specify the route length and static rise to be considered by bidder for slurry pump design.                                                                                                                                                                                                                                                                                         | GLP attached.                                                                                                        |
| 12.0   | General                                              |                                                                                                     |                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                      |
| 12.1   |                                                      |                                                                                                     |                                                                                                                                         | We request BHEL to pay initial advance of at least 10% of contract price (interest free) against submission of equivalent amount BG of reducing in nature.                                                                                                                                                                                                                                 | Payment as per enquiry terms. No advance payment shall be made.                                                      |
| 12.2   |                                                      | Enquiry Terms and Conditions                                                                        | The prices offered shall be firm till completion of project.                                                                            | We propose to submit Variable price for the proposed ash handling system. Please confirm.                                                                                                                                                                                                                                                                                                  | Kindly submit your offer as per enquiry terms. No variable price is acceptable.                                      |
| 12.3   |                                                      |                                                                                                     |                                                                                                                                         | Please provide the proposed pipe routing for BA Slurry discharge pipes/ BA overflow pipes from Bottom Ash hoppers up to slurry sump, HCSD pipe routing from HCSD pump house to Ash Dyke and water pipes from water pump house to boiler area. Please confirm whether these pipes are run on pedestals or pipe rack. Also provide cross section details of pipe racks at various locations. | Detailed drawings to be submitted by bidder during detailed engineering stage. GLP enclosed for your kind reference. |

| S. No. | SECTION OF SPECIFICATION                                         | CLAUSE No.                                                                                   | DESCRIPTION                                                                               | Bidder's Query                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BHEL Reply                                                                                                                                                                 |
|--------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.4   |                                                                  |                                                                                              |                                                                                           | Please furnish the pipe rack elevation drawing indicating various ash handling pipes and its elevation for more clarify.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Detailed drawings to be submitted by bidder during detailed engineering stage. GLP enclosed for your kind reference.                                                       |
| 12.5   |                                                                  |                                                                                              |                                                                                           | Please confirm that BHEL shall be responsible for satisfactory performance of all free issue material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Noted.                                                                                                                                                                     |
| 12.6   |                                                                  |                                                                                              |                                                                                           | Please confirm that PU Solenoid valves, Pu tubes/Copper tubes with fittings for BHEL supplied Pneumatic operated valves if any is in BHEL's scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Shall be in bidder's scope.                                                                                                                                                |
| 12.7   |                                                                  |                                                                                              |                                                                                           | We understand that For fly ash slurry conveying (HCSD slurry) dyke end valves are not applicable. Kindly confirm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | All items, equipments and accessories required for completion of the system other than listed in Annexure-35(List of free issue items will be in bidder's scope of supply. |
| 12.8   |                                                                  |                                                                                              |                                                                                           | Please confirm that supply of various type of clamps, foundation bolts, matching counter flanges, hardware items such as bolts, nuts and washers, gaskets etc. required for all BHEL free issue materials/pipes is in BHEL's scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | All items, equipments and accessories required for completion of the system other than listed in Annexure-35(List of free issue items will be in bidder's scope of supply. |
| 13     | Annexure-5-Equipment Sizing Criteria <b>(NTPC Specification)</b> | Sub-Section–A-02 Equipment Sizing Criteria Cl. No. 4.01.01 - b) Dry Fly Ash Conveying system | <b>ii) Pressure Conveying System</b><br>2. Each ESP pass shall have an independent stream | <p>Please note that in the reference clause, it is specified that each ESP pass shall have an independent stream. We understand that each Pass of ESP shall have an independent stream with dedicated compressor. In accordance with above, for Six (6) ESP passes six (6) independent streams with six (6) Nos working and two (2) Nos common stand by compressors shall be provided for each unit.</p> <p>According to BHEL flow diagram (Dwg No. IS-1-CE-701-301-C001, Rev.02) five (5) nos operating compressors with common header shall be provided for six (6) ESP passes with three (3) nos common stand by compressors.</p> <p>Kindly confirm the number of operating and standby compressors to be provided.</p> | Pl. follow BHEL flow diagram (Dwg No. IS-1-CE-701-301-C001, Rev.02)                                                                                                        |
| 14     | Power Supply System <b>(BHEL Specification)</b>                  | Cl. No. 1.2 L.T. Supply                                                                      | a) Motors and loads up to 160 KW and lighting transformers (1:1)                          | Please note we are following NTPC specification for selection of LT motors i.e. up to 200 KW. Kindly confirm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Please follow BHEL specification for selection of LT motors i.e. up to 160 KW.                                                                                             |
|        | Sub Section B-01, Motors <b>(NTPC Specification)</b>             | Cl. No. 1.06.00                                                                              | b) Above 0.2KW and up to 200KW : 3 phase 415V AC                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                            |

| Sr. No. | Bid Specification                                                                                                             | Bidder's Query                                                                                                                                                                                                                                                    | BHEL's Clarification                                                                                                                     |
|---------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Operating platform for access to Mechanical Dust Separator, SCR, APH, Air Preheater Duct and ESP Hoppers unloading equipments | Bidder understand that Operating platform for access to Mechanical dust separator, SCR & Air Pre heater and Duct Hoppers unloading equipments will be taken from Customer provided support structures or from ground excluded from bidder scope. BHEL to clarify. | Shall be in bidder's scope.                                                                                                              |
| 2       | Air dryer at outlet of TA compressors                                                                                         | Air Dryer at outlet of TA Compressor is not required per bidder standard design to utilise the hot ash temperature. BHEL to accept.                                                                                                                               | moisture separator, After cooler and air drier is required at outlet of TA compressor and bidder shall consider the same in their scope. |
| 3       |                                                                                                                               | Maximum particle size considered for HCSD system is 6 mm.                                                                                                                                                                                                         | Shall be as per the data provided in the enquiry specifications.                                                                         |
| 4       |                                                                                                                               | HCSD pump discharge pressure shall be considered as per Bidder calculation / design. For that bidder requires Rheological test of FA. Please provide.                                                                                                             | Ash Rheology test shall be in bidder's scope.                                                                                            |
| 5       |                                                                                                                               | Fly ash silo bottom clearance considered is 6m.                                                                                                                                                                                                                   | As per NTPC specifications, Layout requirements and standard norms.                                                                      |
| 6       |                                                                                                                               | For Aeration of Silo by Fluidizing air, 10% effective area of silo bottom considered                                                                                                                                                                              | Shall be decided during detailed engineering as per system requirement.                                                                  |
| 7       |                                                                                                                               | Quantity of silo isolation/selection valve shall be as per NIT drawing (NTPC).                                                                                                                                                                                    | Shall be decided during detailed engineering as per project requirement.                                                                 |
| 8       |                                                                                                                               | Bidder venting system from Silo does not required vent fan in vent filter.                                                                                                                                                                                        | Shall be decided during detailed engineering as per project requirement.                                                                 |
| 9       |                                                                                                                               | HCSD system arrangement shall be as per Bidder design standard which includes Recirculation pump in place of charge pump.                                                                                                                                         | Shall be decided during detailed engineering as per project requirement.                                                                 |
| 10      |                                                                                                                               | Please confirm that de-blocking of HCSD line to clear choking will be performed by using HCSD pump only. Also inform margin to be taken for selection of de-blocking pressure over rated condition.                                                               | Shall be decided during detailed engineering as per project requirement.                                                                 |
| 11      |                                                                                                                               | Bidder understand that for HCSD pump flow estimation, specific gravity is considered 2.0. Please confirm.                                                                                                                                                         | Shall be decided during detailed engineering as per project requirement.                                                                 |
| 12      |                                                                                                                               | Hopper elevation to be given for Mechanical Dust Hopper, SCR, Air Pre heater, Duct & ESP Hoppers.                                                                                                                                                                 | please refer the drawings enclosed alongwith enquiry                                                                                     |

| Sr. No. | Bid Specification                                                                                                                                                                                                                                                                                                                                                                       | Bidder's Query                                                                                                                                                                                                                                                                                                                                                      | BHEL's Clarification                                                                                                                                                                                                                                                                                                                                                                |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13      |                                                                                                                                                                                                                                                                                                                                                                                         | Sufficient pressure is required at Compressor Cooling water terminal point (4-5 kg/Cm2). BHEL to ensure that sufficient service water pressure available at terminal point. Also clarify whether recirculation of cooling water is required or not. No booster water pump is considered for meeting CW recirculation line pressure for compressors. Please confirm. | Water will be provided at two points (3-3.5 bar) and not as mentioned in Annexure-8. ( i.e one near boiler area and ONE NEAR Ash water pump house). Exact location will be informed during detailed engineering stage. The Quantity of water should not exceed the Quantity mentioned in Annexure-8. Any booster pump required to meet the requirements shall be in bidder's scope. |
| 14      | Fixtures, fittings, bends, spool pieces, valves, couplings, elbows, gaskets, nuts, bolts, structural steel supports and other accessories as specified and as required for Bottom ash slurry transportation basalt lined pipe lines (one no. independent pipe line for each Jet pump) from the outlet of jet pumps to the ash slurry sump in the bottom ash slurry disposal pump house. | Bidder understand Bottom ash pipes from Jet pump will be laid in trenches under Boiler area and over pedestal along the boiler bay and finally routed on Pipe rack near ESP area. Pedestal construction is in BHEL scope. Please confirm.                                                                                                                           | Any pedestals for this pipe routing will be in BHEL's scope.                                                                                                                                                                                                                                                                                                                        |
| 15      | Dry fly ash cast iron piping from ESP hopper outlet onwards up to buffer hoppers complete with valves, specialties, bends, spool pieces, couplings, pneumatic actuators, structural steel supports, platforms, etc.                                                                                                                                                                     | Bidder understand that for routing of FA conveying pipe from ESP area dedicated pipe rack is envisaged from furthest end of Buffer hopper to HCSD & FA silo and Ash Slurry Pump House area. However, below ESP hopper pipe will be supported from ESP hopper structure. Please clarify and confirm scope for primary and secondary support of pipes..               | The primary and secondary supports shall be considered by bidder suitably by the bidder                                                                                                                                                                                                                                                                                             |
| 16      | Mechanical Dust Separator (MDS) ash conveying up to Intermediate Surge Hopper (Technical specification of NTPC as specified for equipments for ESP ash conveying shall be applicable).                                                                                                                                                                                                  | Bidder understand that for supporting the ash pipes in Mechanical dust separator, SCR & Air Pre heater and Duct Hopper only secondary supports are in bidder scope. Primary support from Boiler and auxiliary structure are in BHEL supply. Please confirm.                                                                                                         | The primary and secondary supportd shall be considered by bidder.                                                                                                                                                                                                                                                                                                                   |
| 17      | A) Common bottom Ash, Economiser ash and economizer duct ash disposal system.<br>B) High Concentration Fly Ash Slurry Disposal System                                                                                                                                                                                                                                                   | Please clearly indicate what will be the distance to be considered for slurry pump sizing for combined slurry disposal system and HCSD system from discharge point to termination point.                                                                                                                                                                            | Latest GLP enclosed alongwith enquiry. Once again attaching the same. The system route lengths shall be selected/sized based on the GLP by bidder.                                                                                                                                                                                                                                  |
| 18      | Ash water recovery system & clarifier                                                                                                                                                                                                                                                                                                                                                   | Bidder has not considered any ash water recovery system or clarifier in his scope. Please indicate detail for recovery system from ash dyke if included in bidder scope of work.                                                                                                                                                                                    | Not in bidder's scope.                                                                                                                                                                                                                                                                                                                                                              |
| 19      | Ash Evacuation System under ESP hoppers                                                                                                                                                                                                                                                                                                                                                 | Ash evacuation system orientation under ESP hoppers shall be as per manufacturer standard design.                                                                                                                                                                                                                                                                   | As per NTPC specifications and shall be fine tuned during detail engg. for better performance of the system.                                                                                                                                                                                                                                                                        |
| 20      | Mill Reject System                                                                                                                                                                                                                                                                                                                                                                      | Same is not in bidder scope. Please confirm.                                                                                                                                                                                                                                                                                                                        | Noted                                                                                                                                                                                                                                                                                                                                                                               |

| Sr. No. | Bid Specification                                                                                                                       | Bidder's Query                                                                                                                                                                                                                                                                                   | BHEL's Clarification                                                                                                                                                                          |
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| 21      | Fire Fighting system for Ash Handling System                                                                                            | Same is not in bidder scope. Please confirm.                                                                                                                                                                                                                                                     | Noted                                                                                                                                                                                         |
| 22      | Silo entry gate                                                                                                                         | Same is not in bidder scope. Please confirm.                                                                                                                                                                                                                                                     | Noted                                                                                                                                                                                         |
| 23      | 3D modeling of Ash Handling System                                                                                                      | Same is not in bidder scope. Please confirm.                                                                                                                                                                                                                                                     | Confirmed in bidder's scope.                                                                                                                                                                  |
| 24      | Bar bending schedule for fabrication drawing                                                                                            | Same is not in bidder scope. Please confirm.                                                                                                                                                                                                                                                     | Please refer Scope Matrix R2- Column No 4 and 5 regarding the details of preparation of detail drawings                                                                                       |
| 25      | Drain sump pump in compressor house area                                                                                                | No drain sump pump has been considered in AHP compressor House.                                                                                                                                                                                                                                  | During detailed engineering and as per project requirement.                                                                                                                                   |
| 26      | HCSD configuration                                                                                                                      | HCSD system configuration shall be as per OEM standard & proven ptactice.                                                                                                                                                                                                                        | As per NTPC specifications only.                                                                                                                                                              |
| 27      | Fly ash valves, Jet pump, Crusher MOC and other standard fly ash equipments                                                             | Same shall be as per OEM standard. Please accept.                                                                                                                                                                                                                                                | As per NTPC specifications only.                                                                                                                                                              |
| 28      | Sieve Analysis for fly ash collected at MDC & SCR hoppers (When MDC & SCR hoppers are in operation)                                     | Same is required to be furnsihed by BHEL.                                                                                                                                                                                                                                                        | Provided in Annexure-A1                                                                                                                                                                       |
| 29      | Water cooling jacket arrangement below MDC & SCR hoppers & Intermediate Surge hoppers                                                   | Water cooling jacket arrangement below MDC & SCR hoppers & Intermediate Surge hoppers will not be provided by bidder because that is not required. bidder valve seat and seal material is suitable to handle hot ash of specified temperature.                                                   | Shall be as per enquiry specifications only.                                                                                                                                                  |
| 30      | ...complete with basalt lined pipe bends...For garlanding of ash dyke MS bends shall be provided...                                     | Please confirm the correct MOC of BA Slurry Disposal pipe fittings at Ash Dyke                                                                                                                                                                                                                   | As per NTPc specifications.                                                                                                                                                                   |
| 31      | Mechanical Ventilation System for HCSD pump houses...                                                                                   | Bidder understands that, as the Pump House is open from sides then Ventilation system is not required. Please confirm Bidder's understanding is in order.                                                                                                                                        | Details of the pump house design regarding opening from all sides shall be decided during detail engg. Hence, Mechanical ventilation if required may be provided by bidder durng detail engg. |
| 32      | HCSD PH - Steel shed open from sides                                                                                                    |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                               |
| 33      | Mechanical Ventilation (Supply & exhaust fans) for different areas in bottom ash slurry pump house.....                                 | Bidder understands that, as the Pump House is open from three sides then Ventilation system is not required. Please confirm Bidder's understanding is in order.                                                                                                                                  | Details of the pump house design regarding opening from all sides shall be decided during detail engg. Hence, Mechanical ventilation if required may be provided by bidder durng detail engg. |
|         | Bottom Ash Slurry PH - ...Other three sides of PH shall be kept open.....                                                               |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                               |
| 34      | Necessary actuator operated slurry duty valves of proven design in suction and discharge of HCSD pumps as per requirement of the system | As per SLFD: Drg. No. 9591-101-POM-A-029, No valve has been shown at discharge end of HCSD pump. Please note that, each HCSD pump is having individual discharge pipe line and there is no inter connection between the lines, Hence the valve at discharge end is not required. Please confirm. | During detailed engineering and as per NTPc specifications.                                                                                                                                   |

| Sr. No. | Bid Specification                                                                                                                                                                                                                 | Bidder's Query                                                                                                                                                                                                                                                        | BHEL's Clarification                    |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 35      | SLFD shows no Isolation Valve and Rotary Feeder at the upstream of Telescopic chute for Dry unloading system for HCSD Silo.                                                                                                       | 1. Please confirm the requirement of Rotary Feeder and Isolation Valve at the upstream of the Telescopic Chute.<br>2. Please also confirm, instead of Rotary feeder , whether Ash feed Valve can be used.                                                             | Shall be as per NTPc specifications.    |
| 36      | ...Each HCSD silo shall have four (4) outlets, two outlets for discharging ash to mixing tanks/ retention Tanks through rotary feeders and ash conditioners one for unloading ash to truck and one blanked outlet for future use. | Bidder understands that one outlet per HCSD Silo will be dedicated for Dry Fly Ash Unloading and further the Dry Fly Ash will be discharged to the "Closed Tanker" only. Please Confirm.                                                                              | Shall be as per NTPC specifications.    |
| 37      | h) Elevation of top of ash dyke: Blank<br>i) Maximum pumping distance: Blank                                                                                                                                                      | Please clarify the Maximum HCSD pumping distance and Static height for pump head calculation.                                                                                                                                                                         | PI refer GLP enclosed alongwith enquiry |
| 38      | Capacity required: To suit to one (1) unit fly ash generation considering 2X50% working pump per unit.<br>...pumping capacity to pump 50% of FA generation of one (1) unit in high concentrated slurry...                         | Each HCSD pump is sized per 50% of Fly Ash Generation. There are two (2) HCSD pumps per silo. Therefore, the capacity conveyed out of each silo when both pumps are operating is equivalent to one unit of fly ash generation. Please confirm bidder's understanding. | Shall be as per NTPC specifications.    |
| 39      | Refer to Note 6, Suitable dust suppression facilities shall be provided in the Silo area                                                                                                                                          | No dust suppression scheme is considered for FA Silo area. Please clarify the scope.                                                                                                                                                                                  | Bidder to consider in the scope.        |
| 40      | ...pump the sludge to ash slurry sump of bottom ash slurry pump house.<br>As per Flow diagram, Sludge will be pumped to Settling & Surge tank.                                                                                    | Please confirm, whether sludge will be discharged to BA slurry sump.                                                                                                                                                                                                  | Yes                                     |
| 41      | ...seepage water recirculation pump house (SWRPH) complexes shall be...                                                                                                                                                           | Bidder understands that, SWRPH and it's piping, pumps and all accessories are in Owner's scope. Please confirm bidder's understanding is in order.                                                                                                                    | Noted                                   |
| 42      | Ash water recirculation system, fugitive dust suppression system at ash pond.                                                                                                                                                     | Not in bidder scope. Please cofirm.                                                                                                                                                                                                                                   | Noted                                   |
| 43      | If the Layout requires the pipes to cross the road on top of ash dyke...                                                                                                                                                          | Bidder understands that, Ash Dyke & it's construction is in Owner's scope hence, supply of Hume Pipes and it's erection is not in Bidder's scope. Please confirm Bidder's understanding is in order.                                                                  | Noted                                   |

| Sr. No. | Bid Specification                                                                                                                                                                                               | Bidder's Query                                                                                                                                                                                                                                                      | BHEL's Clarification                                                                                                                                                    |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 44      | ....grating platform all along the length and for full width of the trestle shall be provided. Further, one walkway of 600mm clear width shall be ensured on the tier meant for routing the ash handling pipes. | Bidder understand that grating for sump & pipe rack are in owner scope. Please confirm the scope.                                                                                                                                                                   | Gratings for sumps shall be in bidder's scope. Gratings for pipe rack will be in BHEL scope.                                                                            |
| 45      | Drive Feed Gate-Air oil operated, to ensure smooth & guided opening/closing to limit friction & wear.                                                                                                           | Feed gate will be driven by air water operated cylinder. Please confirm.                                                                                                                                                                                            | Shall be as per NTPC specifications.                                                                                                                                    |
| 46      | Material of Construction of all Proprietary item, like jet pump, crusher, feed gate, vacuum breaker, material Handling valves, rotary feeder, air intake valves etc.                                            | All these equipment being proprietary in nature, manufacturer shall provide their own standard design & Material of Construction which is proven & working in many domestic & international plants successfully over the years. Please confirm.                     | Shall be as per NTPC specifications.                                                                                                                                    |
| 47      | Type Joint: Sleeve type coupling Joint in straight section flanged joint at fittings, bends.....                                                                                                                | Inside the plant (from BAH to ASPH) cast basalt lined MS pipe will be provided for BA slurry line. Flanged/sleeve coupling will be used for connecting these pipe line.                                                                                             | Shall be as per NTPC specifications.                                                                                                                                    |
| 48      | ...Entire area in the silo area complex shall be paved and have a peripheral RCC drain of adequate capacity & slopes covered with perforated precast RCC slabs of minimum 50 mm thickness....                   | Paving will be done by Owner. Please confirm the scope.                                                                                                                                                                                                             | Civil drawings and works related to silo area Paving is excluded in Bidders scope. However general arrangement details of paving are to be shown in mechanical drawings |
| 49      | ERW pipe as per IS:1239, heavy grade with galvanising as per IS:4736 for pipes upto & including 150 NB.....                                                                                                     | Bidder is considering MS ERW Pipe Non-galvanized for Transport Air application. Please Confirm.                                                                                                                                                                     | Shall be as per NTPC specifications.                                                                                                                                    |
| 50      | BA temperature for cooling water requirement                                                                                                                                                                    | Please confirm that BA temperature indicated by the boiler manufacturer shall be considered in cooling water calculation.                                                                                                                                           | Shall be as per NTPC specifications.                                                                                                                                    |
| 51      | Four(4) nos. pit type weigh bridge one below each fly ash storage silo...                                                                                                                                       | Refer to Bid Specification, Owner to confirm following:<br>i) Bidder is not considering any weigh bridge for Rail unloading system below FA silos.<br>ii) Since Rail has been laid below FA silos, therefore weigh bridge below each silo are not being considered. | Shall be as per NTPC specifications.                                                                                                                                    |
|         | Four(4) nos. dry ash....for Road/Rail loading....                                                                                                                                                               |                                                                                                                                                                                                                                                                     | Shall be as per NTPC specifications.                                                                                                                                    |
| 52      | Bidder shall furnish pressure drop calculation for HCSD system.                                                                                                                                                 | Owner to note that, pressure drop calculation for HCSD system is proprietary in nature, hence the same will be submitted for information only. Please accept.                                                                                                       | Shall be as per NTPC specifications.                                                                                                                                    |
| 53      | HCSD System:<br>• Operating range of pump: 10% to 100% of rated slurry rate                                                                                                                                     | Lower speed of the Ash pump operating range when operating with slurry will be limited by minimum line velocity.                                                                                                                                                    | Shall be as per NTPC specifications.                                                                                                                                    |

| Sr. No. | Bid Specification                                                                | Bidder's Query                                                                                                                                                                                                                                                                                                                | BHEL's Clarification                           |
|---------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| 54      | HCSD System:<br>• Capacity required – To suit to one (1) unit fly ash generation | Each HCSD pump is sized per 50% of Fly Ash Generation i.e ESP & APH ash generation. There are two (2) HCSD systems per silo. Therefore, the capacity conveyed out of each silo when both pumps are operating is equivalent to one unit of fly ash generation. Please confirm our understanding of the requirement is correct. | Shall be as per NTPC specifications.           |
| 55      | Note-2: $\pm 0.00$ of main plant area corresponds to RL 148.00 M.                | Owner to confirm which RL to be considered as EL 0.00M                                                                                                                                                                                                                                                                        | PI refer GLP enclosed alongwith enquiry.       |
|         | Note-14: $\pm 0.0$ M corresponds to RL 147.500 M.                                |                                                                                                                                                                                                                                                                                                                               |                                                |
| 56      | TP-5: From BOP package to Ash Handling                                           | Owner to specify the material properties for this effluent.                                                                                                                                                                                                                                                                   | Shall be informed during detailed engineering. |
| 57      | ...Circular door shall have a diameter or not less than 750 mm....               | Bidder will provide 600 mm access door for man entry. Owner is requested to accept the same.                                                                                                                                                                                                                                  | Shall be as per NTPC specifications.           |
| 58      | MOM dated 28-Apr-16, 10-Aug-16 and 29-Sep-16                                     | BHEL to provide the MOMs if these are considered part of the contract.                                                                                                                                                                                                                                                        | NA                                             |

| PRE BID QUERY LIST                        |                                                                                                            |               |                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Sr. No.                                   | Section / Part / Chapter / Volume                                                                          | Clause No.    | Page No.                           | Bid Specification Stipulation                                                                                                                                                                                                                                                                                                                                                                           | Bidder's query/Stipulation                                                                                                                                                                                                                                                                                 | BHEL's Reply                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>B ELECTRICAL &amp; INSTRUMENTATION</b> |                                                                                                            |               |                                    |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1                                         | Annexure-4_AHP Scope of Supply & Services_R1<br>Annexure-35-Free Supply items_R1                           | 5.02.00       | 40 of 118(PDF)                     | Contractor shall provide power supply distribution panels/cabinets/boxes for sub-distribution of DC/Main UPS/utility feeders on as required basis. The power supply distribution box shall include change over circuitry, static switches, fuse units, MCB's, terminal blocks etc suitable for application.ntractor shall provide power supply distribution panels/cabinets/boxes for sub-distribution. | We envisage 220V / 24V DC System and 230V AC UPS System shall be provided by the Purchaser. Accordingly, this shall be considered as Free issue Item to us. Please confirm.                                                                                                                                | Incoming Feeders for 220V DC System and 230V AC UPS System shall be provided to bidder. Bidder to tap the same & further distribution including DBs as required shall be in scope of bidder including all the required accessories. Necessary loads shall be furnished by bidder. 24V DC system at AHP Control room to be considered by bidder as per NIT including further distribution as required. |
| 2                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                     | 6             | 3 of 620(PDF)                      | Cables (LT Power Cables/ Control Cables/ Instrumentation Cables) and Cable trays from MCC to motors/ Local Control Panel/ Local Starter-cum Control Panels/ JB's/ PDBs/LPBs as applicable.                                                                                                                                                                                                              | We envisage Cable trays for HT Switchboard, PCC, PMCC, MLDB, PDB, WDB, DB, illumination etc. shall be supplied by Client.<br>Bidder will supply Cable Tray as per below criteria (Except HCSD System)-<br>1. Field Equipment to Nearest JB.<br>2.In between Bidder supplied equipments.<br>Please confirm. | Noted. Howwever complete electrical / C&I scope of HCSD System including all supplies is in bidders scope                                                                                                                                                                                                                                                                                             |
| 3                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                     | Note-4        | 5 of 620(PDF)                      | Illumination System is excluded from bidder's scope                                                                                                                                                                                                                                                                                                                                                     | We understand that illumination system shall be designed, supplied, erected & commisioned by Purchaser only and thus, the same is not included in Annexure-35 as free issue item. Kindly confirm.                                                                                                          | Noted.                                                                                                                                                                                                                                                                                                                                                                                                |
| 4                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I R1<br>Annexure-35-Free Supply items R1 | 15            | 5 of 620(PDF)                      | Miscellaneous LT Motors                                                                                                                                                                                                                                                                                                                                                                                 | We understand HT motors are not in our scope and few LT Motors will be supplied by us except as in Annexure-35 (Free issued Item).                                                                                                                                                                         | Noted.All LT motors including electromechanical equipments/actuator driven motors except pump motors as per exclusion are in bidders scope.                                                                                                                                                                                                                                                           |
| 5                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                     | 1, 2, 3       | 3 of 620(PDF)                      | Design of HT Switchgear, HT Cables, Transformer, etc. by BHEL. However, load list & other required details for ordering shall be furnished by bidder                                                                                                                                                                                                                                                    | Since Design is indicated in BHEL scope, we understand that our scope is restricted to furnishing the pre-order stage inputs for these equipment. Vendor offer evaluation & vendor drawing review is excluded from our scope. Kindly confirm whether our understanding is correct.                         | Noted.However necessary pre-order stage inputs to be furnished immediately after order placement by successful bidder                                                                                                                                                                                                                                                                                 |
| 6                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                     | 9             | 4 of 620(PDF)                      | Bidder's scope includes Earthing & Lightning protection with all required associated accessories like Earthing/lightning material etc. as applicable for entire AHP system                                                                                                                                                                                                                              | It is understood that the underground portion of Earthing & Lightning protection system including risers are in Main Plant Package vendor's scope. Only the above ground portion of these systems shall be in our scope. Kindly confirm.                                                                   | Below ground earthing mat / Grounding and lightning protection for the complete buildings and equipment's in the bidders scope including supply of materials.Interconnection of Earthmats under the scope of Bidder                                                                                                                                                                                   |
| 7                                         | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                     | 5<br>11<br>13 | 3 of 620(PDF)<br><br>4 of 620(PDF) | BHEL Scope of Supply: LT PMCC/...../ Local Control Panel/ Local Starter-cum Control Panels/ JB's/ PDBs<br><br>Bidder's Scope of Supply: Power/Control JB<br><br>Bidder's Scope of Supply: Electric/Control panels (local control panels, local starter-cum control panel, local push button stations,.....                                                                                              | Kindly clarify the scope of supply for Local Control Panel, Local Starter-cum-Control Panel, Power & Control JB's, as there seems to be a contradiction between the specification clauses mentioned.                                                                                                       | All the required Local Control Panel, Local Starter-cum-Control Panel, Local push button stations, PDB's, Power & Control JB's are in bidders scope of supply                                                                                                                                                                                                                                         |

| PRE BID QUERY LIST |                                                                                                                                                                     |            |                                |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |
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| Sr. No.            | Section / Part / Chapter / Volume                                                                                                                                   | Clause No. | Page No.                       | Bid Specification Stipulation                                                                                                                                                                                                                                                                                                                                                                                 | Bidder's query/Stipulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | BHEL's Reply                                                                                                                                                                                       |
| 8                  | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                                                                              | 8          | 4 of 620(PDF)                  | HT & LT Cabling& laying works –.....                                                                                                                                                                                                                                                                                                                                                                          | Kindly clarify regarding the scope of supply of <b>flexible tray support system along with the required accessories, structural steel and fire sealing system</b> , since nothing is mentioned in the scope matrix on the same.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | All accessories required for cabling & laying works is in the scope of bidder wherein cable trays are in scope of BHEL. Areas where BHEL is supplying cable trays, tray supports will be with BHEL |
| 9                  | Additional Drawings:<br>i) BHEL's Main Equipment Plan, Drg. No. PE-DG-424-100-M002, Rev. 02<br>ii) NTPC's General Layout Plan, Drg. No. 9591-999-POC-F-001, Rev. 04 | --         | Sheet 01<br><br>Sheet 02       | Location of AHP Switchgear Buildings                                                                                                                                                                                                                                                                                                                                                                          | a) It is understood that BHEL's Main Equipment Plan shall be referred for the locations of Ash Handling System Electrical Buildings, as this differs from the one furnished by NTPC. Kindly confirm.<br>b) Since no separate Electrical Building has been indicated for catering to Unit-2 Ash Extraction System loads, we understand that a Common AHP Switchgear Room-2 as indicated in the layout shall serve for both units. Kindly confirm.<br>c) Location of Fly Ash Silo Electrical Building could not be located in the layout drawing. Kindly suggest the location for the same.                                                                                                                                                                                                                                                                                                                                                                             | a)b)Tentaive locations have been furnished in BHEL Layout & same can be referred. C) Fly ash silo electrical building will be near Fly ash silo utility area.                                      |
| 10                 | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                                                                              | 6          | 3 of 620(PDF)                  | Cables (LT Power Cables/ Control Cables/ Instrumentation Cables) and Cable trays from MCC to motors/ Local Control Panel/ Local Starter-cum Control Panels/ JB's/ PDBs/LPBs as applicable --- supply By BHEL                                                                                                                                                                                                  | Bidder understanding :<br>a) Regarding Control Cables/ Instrumentation Cables, only branch cables ; i.e , from Field instruments & Valve solenoid to field JB shall only be Bidder scope of supply .<br>b) At Field all C&I-JB shall be located in the statagic location from where any field instrument/solenoid cables length <b>shall not be exceeded 30 Meter</b> .<br>Any associated accessories like Cable trays, conduits, trolley arrangement etc for cabling from JB to DDCMIS, shall not be envisaged under bidder scope of supply.<br>c) All control and Instrumentation cables from MCC/ HT switchgear/LPBS to AHP DDCMIS shall not be in bidder scope of supply.<br>Any Soft Communication with main AHP system/DCS required for third party sysytem or third party equipment's controoller supplied by BHEL/ End purchaser ( like Compressor controllers, Dryer Controllers, Main plant DDCMIS , main plant LAN) shall not be bidder's scope of supply. | b) Noted. However cable length cannot be ascertained at this stage & same shall be in bidders scope irrespective of distances                                                                      |
| 11                 | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                                                                              | 7          | Page 4 of 5<br>4 of 620(PDF)   | a. Cables between Field Equipment to JB's/ Local Starter-cum Control Panels/ JB's at Field b. Cable between BIDDER supplied equipment's etc. Cables includes LT Power cables/ Control cable / Instrumentation cable / flexible cable/ festoon/ trailing cable/ special cables/ as applicable and associated accessories like Cable trays, conduits, trolley arrangement, Earthing material as applicable----- | ESP/ APH / ECO/ Dust Seperator /Duct Hopper Ash Level detector ( High and Low ) shall not be Considered under AHP vender scope of supply.<br>Any cables / cable trays for the Same Shall not also be considered under AHP vender Scope of Supply.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | All instruments as required are in bidders scope. No deviation shall be acceptable                                                                                                                 |
| 13                 | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                                                                              | 6          | Page 3 of 5                    | Field devices/ level/ safety switches/solenoid/ switches/ transmitters/ indicators/ gauges/ valves/transducers/ temperature elements & all required instruments etc. as applicable ---- Supply By Bidder                                                                                                                                                                                                      | Complete DDCMIS/ SCADA based automation system for ash handling plant shall be under BHEL scope of supply.<br>Bidder also envisaged that 24VDC power supply system and 230VAC UPS System for DDCMIS/ SCADA or any others system, shall not be in Bidder's scope of supply.<br>Any further distributions from UPS and 24VDC system; i.e , 240VAC ACDBs/ ACFBs and 24VDCDB for Complete DDCMIS/ SCADA/or any other items etc shall be provided by BHEL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Noted for DDCMIS/SCADA. Refer Sr.no.1 for DC/AC distribution                                                                                                                                       |
| 14                 | Annexure-4_AHP Scope of Supply & Services_R1<br>Annexure-35-Free Supply items_R1                                                                                    | Note: 1    | (Page 5 of 5)<br>5 of 620(PDF) | Complete Electrics & Automation for AHP system other than exclusions are in bidder's scope of supply.                                                                                                                                                                                                                                                                                                         | Bidder understand : UPS power supply for HCSD sysytem along with HCSD system PLC in bidder scope of work.<br>Separate 24VDC (battery system) power supply shall not be considered for HCSD system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | HCSD System complete electrical / C&I scope including all supplies is in bidders scope                                                                                                             |
| 15                 | Annexure-33-Technical Specification & Scope matrix- Electrical, C&I_R1                                                                                              | Note: 2    | (Page 5 of 5)<br>5 of 620(PDF) | Complete Electrical for HCSD System – All required motors, VFD system with required transformers,PLC system, cables, trays & associated accessories for complete electrics & automation for HCSD system is in bidder's scope.<br>All the required interface including hardware's/communication systems with main AHP system/DCS shall be bidder's scope                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                    |

| Sl. No. | Clause No. / Page No.                                                                                             | Bidder Queries                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | BHEL Replies                                                                                                                                                                                                                                                                              |
|---------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       |                                                                                                                   | In the Tender Specification, at some places it is mentioned to provide Refrigerant Type Air Drier (if applicable) for Conveying/ Transport Air Compressor. As the driers are in bidder's scope of supply. Hence we request you to kindly have your final decision with regard to scope for drier to bring all bidders at par. Also please note that drier affect the pressure selection of conveying air compressor, results in change in power consumption.                                                                          | Follow NTPC Specification. Shall be decided during detailed engineering stage.                                                                                                                                                                                                            |
| 2       |                                                                                                                   | Please confirm the route length and static lift to be considered for BA Slurry Disposal System as well as for HCSD System to enable is to incorporate the same in our Proposal.                                                                                                                                                                                                                                                                                                                                                       | Latest GLP enclosed alongwith enquiry. Once again attcahing the same.                                                                                                                                                                                                                     |
| 3       |                                                                                                                   | As per the Tender Specification, HCSD Pipeline will be in BHEL's scope of supply. At the same time, it is mentioned that the Bends for the same will be in Bidder's scope of supply. In this regard, we wish to inform you that HCSD Bends will be fabricated from the same pipeline. Hence; we request you to kindly keep the supply of HCSD Bends in your (means BHEL's) scope of supply.                                                                                                                                           | Bidder to indicate how much additional straight length required for bends durimng detail engineering, which will be supplied by BHEL alongwith the pipe sizing calculations.                                                                                                              |
| 4       |                                                                                                                   | Please confirmed the capacity of BA Jet Pump & HCSD System (in TPH) to enable us to incorporate in our Proposal.                                                                                                                                                                                                                                                                                                                                                                                                                      | As per enquiry specifications.                                                                                                                                                                                                                                                            |
| 5       |                                                                                                                   | We are considering the routing of BA Slurry Disposal Pipeline from Jet Pump Discharge upto BA Slurry Sump on RCC Pedestal just above the ground level. Please confirm.                                                                                                                                                                                                                                                                                                                                                                | Noted.                                                                                                                                                                                                                                                                                    |
| 6       |                                                                                                                   | Please confirm the scope regarding Design, Engineering, Manufacturing, Supply & Installation of Air Conditioning & Ventilation System for the complete Ash Handling System for various ash handling buildings. Means whether the same will be in BHEL's scope or in Vendor's scope.                                                                                                                                                                                                                                                   | It is in Bidder's scope                                                                                                                                                                                                                                                                   |
| 7       |                                                                                                                   | Please confirm the scope regarding Design, Engineering, Manufacturing, Supply & Installation of Material Handling Facility for the complete Ash Handling System. Means whether the same will be in BHEL's scope or in Vendor's scope.                                                                                                                                                                                                                                                                                                 | It is in Bidder's scope                                                                                                                                                                                                                                                                   |
| 8       | Annexure-8                                                                                                        | Inline to Annexure-8, we have considered/ presumed water for various application will be made available by M/s BHEL at defined terminal points and also the return water will be fed into the return water header near to the defined water header (for incoming water). Further; we wish to inform you that the required quantity of water (for various applications) will be reviewed/ finalized during detailed engineering based on the finally selected approved vendor.                                                         | Water will be provided at two points and not as mentioned in Annexure-8. ( i.e one near boiler area and ONE NEAR Ash water pump house). Exact location will be informed during detailed engineering stage. The Quantity of water should not exceed the Quantity mantioned in Annexure-8   |
| 9       | Refer Clause 4.4 Scope of Supply # C) Ash Slurry Disposal System I Bottom Ash Disposal System, Page No. 34 of 59: | <b>Refer Clause 4.4 Scope of Supply # C) Ash Slurry Disposal System I Bottom Ash Disposal System, Page No. 34 of 59:</b> Referring to said clause and subsequent Annexure-35 {Free Supply Items (Mechanical) from BHEL} Sr. No. 14 as well as Clause 4.6 Exclusion # 1a), the straight length of BA Slurry Disposal Pipeline will be free issued by M/s BHEL. We have noted the same. Further; we request you to kindly confirm the scope of supply regarding the Cast Basalt Pipeline to be required at Road Culverts/ Crossing etc. | Only staright line pipes will be supplied by BHEL. Further all other required spool pieces, flanges, bends, connectors, etc will have be supplied by bidder. Also any other requirement of cast basalt pipes, bends, etc as per the enclosed layout(MEP) may be considered by the bidder. |

|    |                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                             |
|----|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 10 | Refer Clause 4.4 Scope of Supply # 6 Common Equipment's a) Conveying Air Compressor Room and 2) Transport Air Compressor House: | <p><b>Refer Clause 4.4 Scope of Supply # 6 Common Equipment's a) Conveying Air Compressor Room and 2) Transport Air Compressor House:</b> Referring to above specify both the Clause, it is envisaged to provide Instrument Air Compressor System at both the locations; accordingly there will be total 08 Nos. (04W+04SB) Instrument Air Compressors will be for the proposed ash handling system.</p> <p>Instrument Air Compressors + Drive &amp; Accessories are in M/s BHEL's scope of supply. But reaming system (means Air Drier/ Air Receiver/ Instrument Air Piping with valve &amp; Fittings) are in Vendor's scope. Please confirm the final quantity of Instrument Air Compressor System to be considered for the proposal ash handling system.</p> | Shall be as per NTPC specifications.                                                                        |
| 11 |                                                                                                                                 | <p>We wish to inform you that our scope of supply for mandatory spares shall be limited to the equipment, which to be supplied by us (vendor). The mandatory spares required for the equipment purchase/ sourced by BHEL at their end will be arranged by BHEL. Please confirm.</p> <p>Further; please note that the Mandatory Spares mentioned at Chapter-02 # WS-Plant Utility and Chapter-05 Piping of Annexure-20 are not related to the proposed Ash Handling System, hence not to be considered/ supplied by us (vendor). Please confirm.</p>                                                                                                                                                                                                             | Noted.                                                                                                      |
| 12 | Refer Clause No. 13 of Technical Specification & Scope Matrix - Electrical, C&I # Electrical Scope Division, Page 5 of 5:       | <b>Refer Clause No. 13 of Technical Specification &amp; Scope Matrix - Electrical, C&amp;I # Electrical Scope Division, Page 5 of 5:</b> Referring to above, please indicate whether Vibration Monitoring System for HCSD Motor is required or not. If required, BHEL will supply the same or not.                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Complete Electrical scope for HCSD system shall be in scope of bidder including Vibration monitoring system |
|    |                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                             |
|    |                                                                                                                                 | <p><b>Refer Clause No. 4.5 General Scope of Work of Enquiry Specification, Page No. 42 &amp; 44 of 65:</b> Referring to the said clause, it is envisaged to Supply &amp; Erection of Electro Forged Grating in Pipe-Rack, All Type of Sumps, Walkways, Plate-Form and any other Structural Steel Work of Ash Handling system shall be in Bidder's scope.</p>                                                                                                                                                                                                                                                                                                                                                                                                    | Gratings for sumps shall be in bidder's scope. Gratings for pipe rack will be in BHEL scope.                |
|    | Refer Clause No. 4.5 General Scope of Work of Enquiry Specification, Page No. 42 & 44 of 65:                                    | At the same time as per the "General Scope Matrix for AHP – NTPC Telangana Project (Mechanical and Civil) R1, it is mentioned that except required structural steel work for BA Hopper, Intermediate Surge Hopper, Buffer Hopper and minor supporting structural steel & grating for ECO/ ECO-Duct/ MDC/ SCR/ APH/ APH-Duct Ash Conveying Pipeline (with a sealing limit up to 40 MT), all structural steel work including gratings (Supply + Erection) will be in BHEL's scope.                                                                                                                                                                                                                                                                                | General Scope Matrix for AHP – NTPC Telangana Project (Mechanical and Civil) R2 - Holds good.               |

|    |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                    |
|----|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13 |                                                   | Also at Page No. 42 of 65, it is mentioned that all type of required Structural Steel for Fly Ash / HCSD Silos will be supplied by BHEL as free issued to Bidder and the same is in contradiction with scope matrix Sr. No. E & G wherein the supplies (of all type of structural) including erection is in the scope of BHEL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | General Scope Matrix for AHP – NTPC Telangana Project (Mechanical and Civil) R2 - Holds good.                                                                      |
|    | Refer Sr. No. 2 of 5 of Notes (at last)           | <p>Refer Sr. No. 2 of 5 of Notes (at last), it is envisaged that all SS liner Supply &amp; Fixing will be AHP Mechanical Vendor. As the Supply &amp; Erection of Fly Ash/ HCSD Silos are BHEL's scope, hence it is suggested to keep the SS liner Supply &amp; Fixing for these silos in BHEL's scope to avoid following issues at site.</p> <ul style="list-style-type: none"> <li>ü Storage of cut size SS liner with correct identification marking will be added an additional job to Bidder's site personnel.</li> <li>ü Sorting of SS liner from total huge qty. of cut size SS liner at the time application will be also a task at site.</li> <li>ü Welding of liner at site will also be a time taking job and always a constraint to match the SS liner fixing activity with the main part erection activity.</li> <li>ü As per the NTPC specification, we are allowed for the minimum welding at site and NTPC may not allow welding of complete SS liner qty at site.</li> <li>ü The chances of theft of loose cut size SS liner plates will be more at site.</li> </ul> <p>Please give your final clarification for all these structural to enable us to incorporate.</p> | General Scope Matrix for AHP – NTPC Telangana Project (Mechanical and Civil) R2 - Holds good.                                                                      |
| 14 |                                                   | Please confirm the scope regarding Supply & Erection of Mixing Tank (ART) whether the same are in BHEL's scope or in Bidder's scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Bidder's scope only                                                                                                                                                |
| 15 | Refer Clause/ Sr. No.: 13 of Annexure 35, Rev.-1: | <b>Refer Clause/ Sr. No.: 13 of Annexure 35, Rev.-1:</b> Referring to the said Clause/ Sr. No., Cast Basalt Line Pipes from Jet Pump to Bottom Ash Slurry Sump will be free issued by BHEL in straight length only. In this regard, we wish to inform you that the joining of these pipes is done through coupling & flange (both) and length of pipe (different length of pipe) shall be as per final approved layout drawing during detailed engineering. <u>Hence, It is suggested that BHEL will supply these pipes confirming to the detailed drawings including all spool piece as per layout requirement. Please confirm.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Only straight line pipes of cast basalt will be supplied by BHEL. Further all other required spool pieces, flanges, bends, etc will have to be supplied by bidder. |
| 16 |                                                   | As per the specification all steel structure are of bolted connection design and we presume that supply of HT bolt for BHEL's scope structure are in BHEL's scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Confirmed                                                                                                                                                          |
| 17 |                                                   | We presume that Painting supply including application of BHEL's scope structure is in BHEL scope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Painting of BHEL's scope structure is in BHEL scope.                                                                                                               |
| 18 |                                                   | We presume that supply & installation of foundation bolt are in BHEL scope for all structure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Foundation bolts of BHEL's scope structure is in BHEL scope.Refer                                                                                                  |
| 19 |                                                   | We presume that drawing, design, supply & installation of insert plates are in BHEL scope for complete AHP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Confirmed, Also refer Scope Matrix R2 - Notes                                                                                                                      |