

	PPX-BOI DEPARTMENT BHARAT HEAVY ELECTRICALS LIMITED HEEP: HARDWAR-249 403 (Uttarakhand) TEL: +91 133428-1207, +91 133428-1670	Enquiry No. B/4222/6/0669V1 dated 04/08/2026 Item: Air Cooled Condenser Package Project: 1X800 MW Darlipali STPP and 3X800 MW Telangana STPP
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CORRIGENDA-I

Enquiry No. B/4222/6/0669V1 dated 04/08/2026

Project: 1X800 MW Darlipali STPP and 3X800 MW Telangana STPP

Dated: 26.09.2026

1. The due date for the tender enquiry opening extended up to **30th October 2026.**
2. The following corrigendum and Pre-Bid Clarifications documents are enclosed:

S No.	Document description	Page No. of PDF file
1.	Amendment-1 for Technical Specifications for Air Cooled Condenser Package for 1X800 MW Darlipali	Pg. No. 2-6
2.	Amendment-1 for Technical Specifications for Air Cooled Condenser Package for 3X800 MW Telangana	Pg. No. 7-13
3.	Amendment-1 for Commercial queries for Air Cooled Condenser Package for Darlipali and Telangana	Pg. No. 14-17
4.	Clarifications regarding the remaining Pre-Bid queries	Pg. No. 18-44

NOTE:

1. Bidders to quote according to above Corrigenda/ clarifications.
2. This Corrigendum forms an integral part of the Bidding Document. All other terms, conditions, scope of work, and technical specifications of the original Tender Document remain unchanged. Bidders are required to sign and attach a copy of this Corrigenda along with their bid submission as proof of acknowledgment.
3. All technical drawings and documents (part of Engg corrigendum) will be shared with vendor separately who have submitted/ will submit the FCA.
4. Otherwise specified, Owner/ Engineer/ Customer referred is M/s NTPC, Purchaser / Employer referred is M/s BHEL, and Contractor/Supplier/Vendor referred is Bidder.

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Amendment-01 to ACC Package Technical Specifications dated 22.09.2026

Air Cooled Condenser Package for 1X800 MW Darlipali

Sl. No.	Reference	Instead Of	Read As
01	HE57079 Cl.No. III.1.1 k. i Page 08 of 118	For Category-I Guarantees Accept the equipment/system/plant after levying Liquidated Damages as specified hereunder. The liquidated damages, for shortfall in performance indicated in clause III.2 for this sub-section are on per unit basis and shall be levied separately for each unit, except for the rate indicated for auxiliary power consumption for station auxiliaries which is on station basis. The liquidated damages shall be prorated for the fractional parts of the deficiencies. The performance guarantees coming under this category shall be called 'Category - I' Guarantees.	For Category-I Guarantees Accept the equipment/system/plant after levying Liquidated Damages as specified hereunder. The liquidated damages, for shortfall in performance indicated in clause III.2 for this sub-section are on per unit basis and shall be levied separately for each unit. The liquidated damages shall be prorated for the fractional parts of the deficiencies. The performance guarantees coming under this category shall be called 'Category – I' Guarantees.
02	HE57079, Cl. No. III.1.2.a.i Page 09 of 118	ACC should be designed for guaranteed back pressure of 150 mmHg (abs) (parameters as per annexure IV.3-1) with 5% margin on design steam flow measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 MW output under rated steam condition, zero make-up (MU) and ambient temperature of 40 C° condition, considering pressure drop in Hot Box as per clause IV.3.5.	Guaranteed condenser back pressure shall be 150 mm Hg (abs) (parameters as per annexure IV.3-1) measured at 300 mm downstream of 1 st welding joint of turbine exhaust & hot box at 840 MW output under rated steam conditions, zero make up and ambient temperature of 40° C, considering pressure drop in Hot Box as per clause IV.3.5. However, owner/Purchaser reserve the right to ask for the demonstration of condenser back pressure including 5% margin on design steam flow as per design conditions mentioned at clause IV.3.1 .
03	HE57079, Cl. No. III.1.2.a.ii Page 09 of 118	Guaranteed Power consumption of all unit Auxiliaries required for continuous unit operation measured at motor terminal at the condition i) above.	Guaranteed Power consumption of all unit Auxiliaries required for continuous unit operation measured at motor terminal shall be taken at 840 MW (i.e 105% rated load) under rated steam conditions, guaranteed condenser pressure and ambient temperature of 40°C.

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04	HE57079, Cl. No. III.2 Page 11 of 118	2.For increase in guaranteed auxiliary power consumption for unit auxiliaries as per clause III.1.2 sl.no. (a)(i) & ii)	2.For increase in guaranteed auxiliary power consumption for unit auxiliaries as per clause III.1.2 sl.no. (a) (ii).
05	HE57079 Cl.No. III.2 page 11 of 118		Note added after table: Note: Bidder's aggregate liability to pay liquidated damages for failure to attain the functional guarantees shall not exceed Twelve percent (12%) of the contract price.
06	HE57079, Cl. No. III.2.1 Page 12 of 118	Performance Guarantee Acceptance Test: Condenser back in addition to above shall not be applied. During PG test the base value for correction in steam flow / Heat Load shall be based on value calculated by adding 5% margin on design steam flow.	Performance Guarantee Acceptance Test: Condenser back in addition to above shall not be applied. However, during PG Test, owner/Purchaser reserve the right to ask for the demonstration of condenser back pressure including 5% margin on design steam flow as per design conditions mentioned at clause IV.3.1 .
07	HE57079, Cl. No. IV.2.12 page 18 of 118 (Spares)		Following item has been added: Sufficient quantity of Gearbox breather.
08	HE57079 Cl.No.IV.4.4.3, page 33 of 118	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The thickness of the aluminium layer on the CS base tube plate shall not be less than 50µm; the total thickness of this clad plate shall not be less than 1.2mm. Base tube shall be finned with aluminium fins brazed to the tubes, the fin thickness after manufacturing of tube bundle shall be more than or equal to 0.20 mm. Bidder shall propose the thickness of clad plate and fins in line with their proven practice. Employer / owner reserve the right to visit the vendor and ask for documents to verify the proven practice. In case Employer / owner are	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The minimum wall thickness of the base tube, excluding the Aluminium cladding, shall be 1.27 mm. The Aluminium cladding shall have a minimum thickness of 50 µm. The Aluminium fins shall be brazed to the base tube. After manufacturing of the finned tube, the minimum thickness of the fins shall be 0.20 mm. Fin Thickness shall be selected accordingly. The above-specified thicknesses are minimum requirements, and no negative tolerance shall be permitted. The Bidder shall propose the thickness of the Aluminium-clad plate and fins based on their established and proven

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		not satisfied with supporting documents, necessary modifications shall be done by the bidder without any cost implication.	practice. The Employer/Owner reserves the right to visit the Vendor and review relevant documents, records, and other supporting evidence to verify the claimed proven practice. In the event that the Employer/Owner is not satisfied with the documents or evidence submitted by the Bidder. Bidder shall incorporate the necessary modifications, including revision of material thicknesses, without any additional cost implication to the Employer/Owner.
09	HE57079 Cl.No. IV.4.5 page 35 of 118	 A-Frame sheeting shall also be provided with Metallic fire resistant insulated single leaf hinged doors on each ACC Cell and all streets for movement of personnel / handling equipment.	 A-Frame sheeting shall also be provided with Metallic fire-resistant insulated sandwich panel type single leaf hinged doors on each ACC Cell and all streets for movement of personnel / handling equipment. All the materials required for sealing of each module shall be supplied by the bidder.
10	HE57079 Cl.No. IV.4.5.1.24 Page 37 of 118	Additional spacer rings shall be provided for 20% of the total fans per unit during erection.	Additional spacer rings and/or any other items required as per the design for adjustment of ACC fans shall be provided for 20% of the total number of fans per unit.
11	HE57079 Cl.No. VI.4.5.2.3 Page 38 of 118	 The gear drive shall be of spiral bevel or worm type and reduction may be done either in single stage or multi stages.	 The gear drive shall be of helical type and reduction may be done either in single stage or multi stages.
12	HE57079, Cl. No. IV.4.22 page 50 of 118 (Thermal Insulation)	Thermal insulation to be provided in individual condensate header of each street, condensate piping, ...in conjunction to above requirement.	Thermal insulation to be provided for all the condensate piping starting from the outlet nozzle/connection of Condensate headers below tube bundles from each street, condensate piping, ... in conjunction to above requirement.
13.	HE57079 Cl.No.IV.7.1.40, page 58 of 118 Cl.No.XV.4 (iii) page 115 of 118	Vendor to follow BHEL and customer specifications/requirement in totally. If there is difference between BHEL contract and customer specifications requirement, the most	Vendor to follow BHEL specification, applicable design standard and customer specifications / requirement in totality. If there is difference between BHEL specification, applicable design standard and customer specifications requirement, the most

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		stringent requirements shall be followed by bidder with information to BHEL.	stringent requirements shall be followed by bidder with information to BHEL.
14.	HE57079 Cl.No. VI.4.1 (iii), Page 81 of 118	Remaining temperature transmitters are to be Single Input DIN rail mounting type, mounted in JB's.	Remaining temperature transmitters in main plant and auxiliary plant areas are to be Single Input field mounted type .
15.	HE57079 Cl.No.VI.10.6, Page 94 of 118	Necessary signal interface of ACC DCS with MAIN PLANT DCS shall be in ACC vendor scope.	Clause deleted.
16	HE57079, Cl. No. VII (Civil) Page 97 of 118		New Annexures have been added & shall be referred in addition to requirements specified. 1. Annexure-AMD01-02 (Topographical survey & site levelling plan) 2. Annexure-AMD01-03 (Tech_Spec_Civil_Addendum)
17.	HE57079 Cl. No. VII.1 (i) Page 98 of 118	Design, fabrication, ..., TG building to ACC is in BHEL scope.	Design, fabrication, ..., TG building to ACC is in BHEL scope. Bidder to consider the load of 20 MT (not to exceed) on the staircase due to interconnecting platform.
18.	HE57079 Cl.No. VII.2(a), Page 99 of 118	In case bidder prefers to use any other software (other than Staad Pro) the same is also acceptable provided proper validation is carried out and the licensed copy of the software (1 No.) is also be supplied to BHEL without limitation of time duration for BHEL's use. All softwares used by bidder for executing the design shall be of latest version of internationally accepted, widely used and available in the market. The software requirement for the review is mandatory and hence this will be retained.	In case bidder prefers to use any other software (other than Staad Pro) the same is also acceptable provided proper validation is carried out and the licensed copy of the software (1 No.) is also to be supplied for BHEL's use before document submission date. The subscription of such softwares shall be valid upto 1 Year from ACC steel structure drawings submission date or date of approval of document, whichever is later. All softwares used by bidder for executing the design shall be of latest version of internationally accepted, widely used and available in the market. The software requirement for the review is mandatory and hence this will be retained.
19.	HE57079 Annexure IV.3-2 "Layout Constraints"	Height of Buildings below ACC.	Please consider the following height parameters for calculations and bid preparation 1. ACC Bldg 1 - 16m

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			Consists of 3 Storeys First Floor : 4 M Second Floor : 5 M Third Floor : AHU Room (35 M x12 M, 3.0 M high) 2. ACC Bldg 2 : 9 M approx.. 3. Space for CPU service vessel: (Plan Area 35MX14M, & Height-7 M) 4. HV transformer below ACC shed : 13 M 5. CPU regeneration unit: (Plan area 24MX40M & Height-12 M, alkali storage area : 33.2x 21 M, N-pit Plan Area-20Mx18.5M) The above information is tentative. Final details shall be provided during detailed engineering.
20.	HE57079 Annexure IV.3-2 “Layout Constraints”		Max. available dimensions for ACC may be considered as 142 m along TG building & 146m in perpendicular (from A-Row to Switch Yard side). New Addendum “Annexure-AMD01-01” added for height & distance details of conveyor in the vicinity of ACC.
21.	HXE-SK-2372-2 (Bid Evaluation Criteria)		Refer Annexure-AMD01-04 for revised document HXE-SK-2372-2_R01 (Bid Evaluation Criteria).
22.	HXE-SK-2372-3 (Sub-vendor Items)		Refer Annexure-AMD01-05 for revised document HXE-SK-2372-3 R01 (Sub-vendor items).
23.	HE57079		Refer Annexure-AMD01-06 for new document added: HXE-SK-2372-4 “List of documents / Annexures for ACC package for 1X800 MW Darlipali STPP”

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S. No.	Reference	Instead Of	Read As
01	HXE/SK/2375/2 Rev. 00	HXE/SK/2375/2 Rev. 00 Bid Evaluation & Loading Criteria	Document revised with Rev. 01. Please refer Annexure-AMD01-05 for revised document. “HXE/SK/2375/2 Rev. 01 Bid Evaluation & Loading Criteria”
02	HXE/SK/2375/3 Rev. 00	HXE/SK/2375/3 Rev. 00 Sub-Vendor Items	Document revised with Rev. 01. Please refer Annexure-AMD01-06 for revised document. “HXE/SK/2375/3 Rev. 01 Sub-Vendor Items”
03	HE57080 Cl.No. III.1.1 k. i Page 09 of 127	For Category-I Guarantees Accept the equipment/system/plant after levying Liquidated Damages as specified hereunder. The liquidated damages, for shortfall in performance indicated in clause III.2 for this sub-section are on per unit basis and shall be levied separately for each unit, except for the rate indicated for auxiliary power consumption for station auxiliaries which is on station basis. The liquidated damages shall be prorated for the fractional parts of the deficiencies. The performance guarantees coming under this category shall be called ‘Category - I’ Guarantees.	For Category-I Guarantees Accept the equipment/system/plant after levying Liquidated Damages as specified hereunder. The liquidated damages, for shortfall in performance indicated in clause III.2 for this sub-section are on per unit basis and shall be levied separately for each unit. The liquidated damages shall be prorated for the fractional parts of the deficiencies. The performance guarantees coming under this category shall be called ‘Category – I’ Guarantees.
04	HE57080, Cl. No. III.1.2.a.i Page 10 of 127	ACC should be designed for guaranteed back pressure of 150 mmHg (abs) (parameters as per annexure IV.3-1) with 5% margin on design steam flow measured	Guaranteed condenser back pressure shall be 150 mm Hg (abs) (parameters as per annexure IV.3-1) measured at 300 mm downstream of 1 st welding joint of turbine exhaust & hot box at

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		at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 MW output under rated steam condition, zero make-up (MU) and ambient temperature of 40 C condition, considering pressure drop in Hot Box as per clause IV.3.5.	840 MW output under rated steam conditions, zero make up and ambient temperature of 40° C, considering pressure drop in Hot Box as per clause IV.3.5. However, owner/Purchaser reserve the right to ask for the demonstration of condenser back pressure including 5% margin on design steam flow as per design conditions mentioned at clause IV.3.1 .
05	HE57080, Cl. No. III.1.2.a.ii Page 10 of 127	Guaranteed Power consumption of all unit Auxiliaries required for continuous unit operation measured at motor terminal at the condition i) above.	Guaranteed Power consumption of all unit Auxiliaries required for continuous unit operation measured at motor terminal shall be taken at 840 MW (i.e 105% rated load) under rated steam conditions, guaranteed condenser pressure and ambient temperature of 40°C.
06	HE57080, Cl. No. III.2 Page 12 of 127	2.For increase in guaranteed auxiliary power consumption for unit auxiliaries as per clause III.1.2 sl.no. (a)(i) & ii)	2.For increase in guaranteed auxiliary power consumption for unit auxiliaries as per clause III.1.2 sl.no. (a) (ii).
07	HE57080, Cl. No. III.2.1 Page 12 of 127	Performance Guarantee Acceptance Test: Condenser back in addition to above shall not be applied. During PG test the base value for correction in steam flow / Heat Load shall be based on value calculated by adding 5% margin on design steam flow.	Performance Guarantee Acceptance Test: Condenser back in addition to above shall not be applied. However, during PG Test, owner/Purchaser reserve the right to ask for the demonstration of condenser back pressure including 5% margin on design steam flow as per design conditions mentioned at clause IV.3.1 .
08	HE57080 Cl.No. III.2 Page 12 of 127	III.2 Liquidity Damages:	III.2 Liquidity Damages (per unit basis):
09	HE57080	Note added	<u>Note:</u> Bidder's aggregate liability to pay

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	Cl.No. III.2 Page 12 of 127		liquidated damages for failure to attain the functional guarantee shall not exceed Twelve percent (12%) of the contract price.
10	HE57080 Cl.No. IV.1 xxxi Page 16 of 127	1 No. acoustic device and 1 No. thermographic camera to cater the requirement.	Refer Annexure-AMD01-01 in Amendment No.1 (General requirements of Acoustic and thermographic camera).
11	HE57080 Cl.No. IV.2.9 Page 18 of 127	... 1 No. interconnection platform between TG building and staircase towards A-Row will be provided by BHEL. Bidder to consider the load on the staircase due to the same in design during detailed engineering.	... 1 No. interconnection platform between TG building and staircase towards A-Row will be provided by BHEL. Bidder to consider the load of 20 MT (not to exceed) on the staircase due to interconnecting platform.
12	HE57080 Cl.No.IV.3.36, Page 26 of 127	ACC supporting super structure (RCC) shall be designed by the Bidder based on working stress method for (1) structural steel as per IS 800 & for (ii) RCC pylon as per IS 4998 & CICIND model code and RCC foundation as per IS 456.	ACC supporting super-structure shall be designed by the Bidder based on limit state method for (i) structural steel as per IS 800 & for (ii) RCC pylons as per IS 4998 & CICIND model code and RCC foundations as per IS : 456.
13	HE57080 Cl.No. IV.4.1.3, Page 27 of 127	The ETD shall be connected via welded joint with LP Outer casing, No Bellow is allowed in the ETD. Accumulation of drains & condensate are allowed inside ETD.	The ETD shall be connected via welded joint with LP Outer casing, No Bellow is allowed in the ETD. Accumulation of drains & condensate are not allowed inside ETD.

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14	HE570780 Cl.No.IV.4.4.3, Page 35 of 127.	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The thickness of the aluminium layer on the CS base tube plate shall not be less than 50 µm; the total thickness of this clad plate shall not be less than 1.2 mm. Base tube shall be finned with aluminium fins brazed to the tubes, the fin thickness after manufacturing of tube bundle shall be more than or equal to 0.20 mm. Bidder shall propose the thickness of clad plate and fins in line with their proven practice. Employer / Owner reserve the right to visit the vendor and ask for documents to verify the proven practice. In case Employer / Owner are not satisfied with supporting documents, necessary modifications shall be done by the bidder without any cost implication.	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The minimum wall thickness of the base tube, excluding the Aluminium cladding, shall be 1.27 mm. The Aluminium cladding shall have a minimum thickness of 50 µm. The Aluminium fins shall be brazed to the base tube. After manufacturing of the finned tube, the minimum thickness of the fins shall be 0.20 mm. Fin Thickness shall be selected accordingly. The above-specified thicknesses are minimum requirements, and no negative tolerance shall be permitted. The Bidder shall propose the thickness of the Aluminium-clad plate and fins based on their established and proven practice. The Employer/Owner reserves the right to visit the Vendor and review relevant documents, records, and other supporting evidence to verify the claimed proven practice. In the event that the Employer/Owner is not satisfied with the documents or evidence submitted by the Bidder. Bidder shall incorporate the necessary modifications, including revision of material thicknesses, without any additional cost implication to the Employer/Owner.
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15	HE57080 Cl.No. IV.4.5 Page 36 of 127	 A-Frame sheeting shall also be provided with Metallic fire resistant insulated single leaf hinged doors on each ACC Cell and all streets for movement of personnel / handling equipment. All the materials required for sealing of each module shall be supplied by the bidder.....	... A-Frame sheeting shall also be provided with Metallic fire-resistant insulated sandwich panel type single leaf hinged doors on each ACC Cell and all streets for movement of personnel / handling equipment. All the materials required for sealing of each module shall be supplied by the bidder. ...
16	HE57080 Cl.No. IV.4.22 Page 53 of 127	Thermal insulation to be provided in individual condensate header of each street, condensate piping, drain piping, tanks, deaerator, piping from duct to drain tank, duct up to 2.5m (or barricaded with chains). ...	Thermal insulation shall be provided for all the condensate piping starting from the outlet of condenser header below tube bundle from each street. Further insulation shall also be provided for drain piping, tanks, deaerator, piping from ground duct to drain tank. For Ground Duct only, safety fence or barricading can be provided up to 2.5m height from the Ground Level. ...
17	HE57080 Cl.No. IV.7.1.36, Page 63 of 127 HE57080 Cl.No.XV.4 (iii) Page 123 of 127	... Vendor to follow BHEL and customer specifications/requirement in totally. If there is difference between BHEL contract and customer specifications requirement, the most stringent requirements shall be followed by bidder with information to BHEL. ...	... Vendor to follow BHEL, applicable design standard and customer specifications / requirement in totally. If there is difference between BHEL contract, applicable design standards and customer specifications requirement, the most stringent requirements shall be followed by bidder with information to BHEL. ...
18	HE57080 Cl.No. V Page 76 of 127	V. ELECTRICAL ...	V. ELECTRICAL (BHEL Scope except motors, Terminal point is at motor terminal). ...

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19	Annexure VII-2. “Foundation System & Geotechnical Data”		Addendums added to Annexure VII-2. Refer Annexure-AMD01-02 (Topographical Survey) & Annexure-AMD01-03 (Site Levelling Plan).
20	Annexure IV.3-2 “Layout Constraints”	Height of Buildings below ACC	<u>Addendum.</u> <u>Height of Buildings below ACC</u> Please consider the following height parameters for calculations and bid preparation 1. ACC Bldg 1 - 10.5m approx. (incl. parapet wall) 2. ACC Bldg 2 - 10.5m approx. (incl. parapet wall) 3. Space for CPU service vessel: Plan Area 35MX14M, & Height-7 M 4. HV transformer below ACC shed -13 M 5. CPU regeneration unit: Plan Area 85MX38M & Height-12 M, N-pit: Plan Area-50Mx25M The above information is tentative. Final details shall be provided during detailed engineering.
21	HE57080 Cl.No. IV.4.5.2.3 Page 48 of 127	All couplings shall be as per standard practice of the bidder. The gear drive shall be of spiral bevel or worm type and reduction may be done either in single stage or multi stages.	All couplings shall be as per standard practice of the bidder. The gear drive shall be of helical type and reduction may be done either in single stage or multi stages.

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22	HE57080 Cl.No. IV.4.5.1.24 Page 39 of 127	Additional spacer rings shall be provided for 20% of the total fans per unit during erection.	Additional spacer rings and/or any other items required as per the design for adjustment of ACC fans shall be provided for 20% of the total number of fans per unit.
23	Annexure VII-1 Specification for Civil Works		New Addendum added to Annexure VII-1 “Specification for Civil Works” as per Annexure-AMD01-04.
24	HE57080 Cl.No. VI.4.1 (iii) Page 87 of 127	Remaining temperature transmitters are to be Single Input DIN rail mounting type, mounted in JB's. ...	Remaining temperature transmitters in main plant and auxiliary plant areas are to be Single Input field mounted type.
25	HE57080 Cl.No.VI.10 (6), Page 102 of 127	Necessary signal interface of ACC DCS with MAIN PLANT DCS shall be in ACC vendor scope.	Clause deleted.
26	HE57080 Cl.No. VII.2(a), Page 107 of 127	In case bidder prefers to use any other software (other than Staad Pro) the same is also acceptable provided proper validation is carried out and the licensed copy of the software (1 No.) is also be supplied to BHEL without limitation of time duration for BHEL's use. All softwares used by bidder for executing the design shall be of latest version of internationally accepted, widely used and available in the market. The software requirement for the review is mandatory and hence this will be retained.	In case bidder prefers to use any other software (other than Staad Pro) the same is also acceptable provided proper validation is carried out and the licensed copy of the software (1 No.) is also to be supplied for BHEL's use before document submission date. The subscription of such softwares shall be valid upto 1 Year from ACC steel structure drawings submission date or date of approval of document, whichever is later. All softwares used by bidder for executing the design shall be of latest version of internationally accepted, widely used and available in the market. The software requirement for the review is mandatory and hence this will be retained.

**Amendment-01 (Commercial) Air Cooled Condenser Package for 1x800
MW Darlipali and 3X800 MW Telangana TPP**

S. No.	Reference	Instead Of	Read As
01	ATC Clause no.16	<u>Guarantee/Warranty/Defect Liability:</u> 1. The Contractor warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed. 2. The Defect Liability Period shall be eighteen (18) months from the date of Completion of the Facilities or twelve (12) months from the date of Operational Acceptance of the Facilities, whichever first occurs, -Completion of facilities is defined as completeness of erection of contractor scope equipment's in all respect and Trial operation (full load for 72 hours) of the main plant has been achieved. -Operational Acceptance shall occur in respect of the Facilities have been completed and the Guarantee Test (PG Teat of the plant) has been successfully completed and the Functional Guarantees are met. If during the Defect Liability Period any defect shall be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the Employer regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect. 3. The Employer shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Employer shall afford all reasonable opportunity for the Contractor to inspect any such defect.	<u>Guarantee/Warranty/Defect Liability:</u> 1. The Contractor warrants that the Facilities or any part thereof shall be free from defects in the design, engineering, materials and workmanship of the Plant and Equipment supplied and of the work executed. 2. The Defect Liability Period shall be eighteen (18) months from the date of Completion of the Facilities or twelve (12) months from the date of Operational Acceptance of the Facilities, <i>or Sixty (60) months from the date of completion of erection</i>, whichever first occurs. -Completion of facilities is defined as completeness of erection of contractor scope equipment's in all respect and Trial operation (full load for 72 hours) of the main plant has been achieved. -Operational Acceptance shall occur in respect of the Facilities have been completed and the Guarantee Test (PG Teat of the plant) has been successfully completed and the Functional Guarantees are met. <i>- Completion of erection is defined as completeness of erection of contractor scope equipment's in all respect of the ACC has been achieved.</i> If during the Defect Liability Period any defect shall be found in the design, engineering, materials and workmanship of the Plant and Equipment supplied or of the work executed by the Contractor, the Contractor shall promptly, in consultation and agreement with the <i>Owner/ Purchaser</i> regarding appropriate remedying of the defects, and at its cost, repair, replace or otherwise make good (as the Contractor shall, at its discretion, determine) such defect as well as any damage to the Facilities caused by such defect.

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	4. The Employer shall afford the Contractor all necessary access to the Facilities and the Site to enable the Contractor to perform its obligations. The Contractor may, with the consent of the Employer, remove from the Site any Plant and Equipment or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site. 5. If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Employer may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests. If such part fails the tests, the Contractor shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests in character shall in any case be not less than what has already been agreed by the Employer and the Contractor for the original equipment/part of the Facilities. 6. If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Employer may, following notice to the Contractor, proceed to do or get, such work done at the risk of the Contractor, and the reasonable costs incurred by the Employer in connection therewith shall be paid to the Employer by the Contractor or may be deducted by the Employer from any monies due to the Contractor or claimed under the Performance Security. If Employer gets such works done, the cost of getting such work done by the Employer shall be determined including Employer's overhead on the value executed at the risk & cost of the contractor. 7. If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability	3. The Owner/ Purchaser shall give the Contractor a notice stating the nature of any such defect together with all available evidence thereof, promptly following the discovery thereof. The Owner/ Purchaser shall afford all reasonable opportunity for the Contractor to inspect any such defect. 4. The Owner/ Purchaser shall afford the Contractor all necessary access to the Facilities and the Site to enable the Contractor to perform its obligations. The Contractor may, with the consent of the Owner/ Purchaser, remove from the Site any Plant and Equipment or any part of the Facilities that are defective if the nature of the defect, and/or any damage to the Facilities caused by the defect, is such that repairs cannot be expeditiously carried out at the Site. 5. If the repair, replacement or making good is of such a character that it may affect the efficiency of the Facilities or any part thereof, the Owner/ Purchaser may give to the Contractor a notice requiring that tests of the defective part of the Facilities shall be made by the Contractor immediately upon completion of such remedial work, whereupon the Contractor shall carry out such tests. If such part fails the tests, the Contractor shall carry out further repair, replacement or making good (as the case may be) until that part of the Facilities passes such tests. The tests in character shall in any case be not less than what has already been agreed by the Owner/ Purchaser and the Contractor for the original equipment/part of the Facilities. 6. If the Contractor fails to commence the work necessary to remedy such defect or any damage to the Facilities caused by such defect within a reasonable time (which shall in no event be considered to be less than fifteen (15) days), the Owner/ Purchaser may, following notice to the Contractor, proceed to do or get, such work done at the risk of the Contractor, and the reasonable costs incurred by the Owner/ Purchaser in connection therewith shall be paid to the Owner/ Purchaser by the Contractor or may be deducted by the Owner/ Purchaser from any monies due to the Contractor or claimed under the Performance Security. If Owner/ Purchaser gets such works done, the cost of getting such work done by the Owner/ Purchaser shall be
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	Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Employer because of any of the aforesaid reasons. Upon correction of the defects in the Facilities or any part thereof by repair/replacement, such repair/replacement shall have the Defect Liability Period extended by a period of twelve (12) month from the time such replacement/repair of the Facilities or any part thereof. However, Defect Liability Period for such repaired /replaced Facilities or any part thereof shall not be extended by more than a period of 36 months from Completion of Facilities and 30 months from Operational acceptance whichever is earlier excluding the period during which such facility could not be used due to the aforesaid defect. Further, in case of repeated defects (three or more times) observed for such repaired / replaced facility during the defect liability period including extended period, the Employer has right to recover the reasonable costs incurred by the Employer to make good of the said facility. If Employer gets such works done, the reasonable cost of getting such work done by the Employer shall be determined including Employer's overhead on the value executed. 8. In any Case, if end customer pass on any liability during defect liability period pertaining to contractor scope, the cost of getting such work done shall be passed on to contractor by the Employer, including Employer's overhead on the value executed. Latent Defect Liability: 1. At the end of the Defect Liability Period, the contractor liability ceases except for latent defects. The contractor's liability for latent defects warranty shall be limited to a period of five (5) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently lying within the material or arising out of design deficiency which do not manifest themselves during the Defect Liability Period but later.	determined including Owner/ Purchaser's overhead on the value executed at the risk & cost of the contractor. 7. If the Facilities or any part thereof cannot be used by reason of such defect and/or making good of such defect, the Defect Liability Period of the Facilities or such part, as the case may be, shall be extended by a period equal to the period during which the Facilities or such part cannot be used by the Owner/ Purchaser because of any of the aforesaid reasons. Upon correction of the defects in the Facilities or any part thereof by repair/replacement, such repair/replacement shall have the Defect Liability Period extended by a period of twelve (12) month from the time such replacement/repair of the Facilities or any part thereof. However, Defect Liability Period for such repaired /replaced Facilities or any part thereof shall not be extended by more than a period of 36 months from Completion of Facilities and 30 months from Operational acceptance whichever is earlier excluding the period during which such facility could not be used due to the aforesaid defect. Further, in case of repeated defects (three or more times) observed for such repaired / replaced facility during the defect liability period including extended period, the Owner/ Purchaser has right to recover the reasonable costs incurred by the Owner/ Purchaser to make good of the said facility. If Owner/ Purchaser gets such works done, the reasonable cost of getting such work done by the Owner/ Purchaser shall be determined including Owner/ Purchaser's overhead on the value executed. 8. In any Case, if end customer pass on any liability during defect liability period pertaining to contractor scope, the cost of getting such work done shall be passed on to contractor by the Owner/ Purchaser, including Owner/ Purchaser's overhead on the value executed. Latent Defect Liability: 1. At the end of the Defect Liability Period, the contractor liability ceases except for latent defects. The contractor's liability for latent defects warranty shall be limited to a period of five (5) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently
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			lying within the material or arising out of design deficiency which do not manifest themselves during the Defect Liability Period but later. 2. <i>In the event of any dispute by the Owner regarding latent defects, the Purchaser will finalize the third party to resolve the dispute, in consultation with the contractor and subject to the Owner's acceptance.</i> <i>If a latent defect is established or proven, all fees and expenses incurred in engaging the third-party shall be borne by or recoverable from the contractor.</i>
2	New	NA	<u>Limitation of Liability:</u> <i>Notwithstanding anything to the contrary in this Contract or any other mutually agreed document between the parties, the maximum liability, for damages, of the contractor, its servants or agents, shall under no circumstances exceed an amount equal to the Price of the Contract or the Work Order.</i> <i>However, the same shall not be applicable on the recoveries made by Customer from BHEL on account of Contractor, any other type of recoveries for workmanship, material, T&P etc. due from the contractor.</i>

Sl.No.	Clause No.	Pre-Bid Query	BHEL response
1	Common Point - Electrical & Civil	Kindly provide us details battery limit for Electrical and instrumentation / Civil. Annexure IV.1-1 Mechanical Scope between BHEL & Bidder- TELANGANA - This document is very generic with respect to Electrical scope and battery limit	For scope clarity regarding Electrical and instrumentation / Civil, kindly refer chapter V - Electrical. chapter VI - Control & Instrumentation. Chapter VIII - Terminal Points
2		Design & Construction of Control room, Switch Gear room and MCC room are not considered in our scope. Please confirm.	Confirmed.
3	Layout Constraints	The layout given by BHEL shows 10X9=90modules. Shall we design as per our standard for 80modules or do we need to maintain 90 modules. Kindly confirm	No. of modules shown in layout is indicative only. Final no. of modules shall be decided by the bidder as per the design considering the plot area and layout constraints etc. Total space available has already been indicated.
4		Volume of Turbine, dumping and hot box in ToTAl	Refer clause no. II-ii(g) of specification.
5		Drains to hot well to size drain tank	Refer Annexure IV.3-1, IV.3-4, IV.3-8. System drains flow to drain tank has been indicated as per HBDs. Bidder shall consider quantity of self condensation over and above the indicated maximum flow for sizing of drain tank. However, sizing of drain tank shall be done in line with HEI.
6		De-aerator supplier to be considered	Bidder to propose sub-vendors for approval by BHEL & NTPC after award.
7		kindly provide the MSL of the site	Refer Annexure II.1 of specification. MSL for Darlipali - 230m, Telangana - 156m.
8		make up water flow to tank/de-aerator/02 content in make up water - please provide	Refer clause IV.4.6.8 of specification.
9		Condensate tank size - as per HEI its 5 mins. Kindly confirm	Refer clause no. IV.3.31 of specification.
10		Kindly specify auxiliary power required	Refer clause III.2 of specification along with HXE/SK/2372/2 & HXE/SK/2375/2 for both the projects.
	Quality Related Points:		
1	General clarificaitons	All testing shall be as per Heat Exchange Institute standard and NTPC approved MQP. Additional testing shall not be performed. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
2		All testing shall be as per Heat Exchange Institute standard and NTPC approved MQP. Additional testing shall not be performed. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
3		All vendors may not have Virtual inspection facility - Smart Glasses. Other type of Virtual Inspection shall be acceptable viz., MS Team, WhatsApp, Google meet, Webex and any other digital media platform. Please confirm.	Any form of Virtual inspection is not permitted. Inspections are to be attended with physical presence at works by bidder's authorised representative.
4		Tube bundle raw materials for Tubes and Fins are not available in India. For vacuum pump, some parts such as casing is sourced from other countries. Hence these material / componets have to be imported. Please confirm.	These items are customer controlled w.r.t. vendor approval and QP approval. Bidder to propose sub-vendors for approval by BHEL & NTPC.
5		Check test shall reveal Plate acceptance. Please confirm.	All the material to be supplied by Bidder will be correlatable to test certificates. Check test will be done with prior intimation to BHEL and comply to approved QP requirements.
	ANNEXURE IV 7-15		
1	SUB-SECTION-E-08 - STEAM TURBINE & INTEGRAL AUXILIARIES	All condenser weld shall undergo 100% Visual Testing. No supplemental NDE (such as RT, UT, MPI, DPT) requiremments as per Heat Exchange Institute standard - Air cooled condenser. Exhaust Steam Duct will come under Accessories. Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
2	CLAUSE NO. 1.03.02, (B) FAN (e)	Fan assembly with blade - complete balancing not feasible. In lieu, Hub Dynamic balancing and individual blade moment balance test will be done. Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
3	CLAUSE NO. 1.03.02, (B) FAN (g)	This type testing facility is not available hence can not be conducted. Please confirm.	Specified clause reference no. is not available. Bidder to comply with the specification.
4	1.03.02, (E)	For IBR piping, RT or UT shall be as per IBR 1950 latest edition. For Non IBR piping such as condensate, Air extraction piping shall undergo only 100% weld visual as per HEI standard. Please confirm.	Bidder to comply with specification.
5	1.10.03 (e)	Only pneumatic test shall be applicable for Air cooled condenser. Please confirm.	Confirmed. In addition to this, water fill / Hydro test as applicable & mentioned in respective clauses in specification for ACC equipment shall be done.
6	1.10.03 (f)	It will be part of the PG test of ACC.	Noted. The same is in bidder's scope.
7	1.05.00	All NDT shall be as per NTPC approved MQP and Drawing. (For Storage Tank). Please confirm.	All non-destructive testing, as per BHEL tender specification, is to be performed.
8	1.06.02	Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
9	1.06.02 (f)	Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
10	1.08.01	This needs to be waived. Please confirm.	Bidder to comply with specification.

11	Fan	Only Moment weighing of blades, Hub Dynamic balancing test, Load deflection test of blades, Blade track variation test, Proof load test shall be performed. Testing will be performed as per previously approved NTPC MQP. Please confirm.	Bidder to comply with specification.
12	Sub Secn. E-10	Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
13	Sub Secn. E-05	Testing shall be performed as per ENEXIO Design approved testing code requirements. Please confirm.	Bidder to comply with specification.
14	Secn. E 42	Testing will be performed as per previously approved NTPC MQP. Please confirm.	All testing, as per BHEL tender specification, is to be performed.
SPECIFICATION OF SURFACE PREPARATION		TECHNICAL SPECIFICATION SECTION-VI, PART-B	
1	1.05.00	SURFACE PREPARATION & PAINTING shall be as per NTPC approved Painting schedule: 9861-110-PVM-Y-012-02. Please confirm.	Mentioned document number is not known to BHEL. Surface Preparation and painting shall be in line with requirements specified under Annexure IV.5-1. Project specific paint schedule shall be prepared by the bidder for approval of Owner.
ADDITIONAL TERMS AND CONDITIONS (ATC)			
1	Section 3 PRICE BASIS / BASIS OF QUOTATION 3.3 MINIMUM E&C CHARGES	Please confirm the exact formula for minimum E&C loading, e.g. E&C 10% of Main Supply basic price + freight , excluding GST, and clarify whether mandatory spares, PG tests, type tests and training are excluded from the calculation.	No loading has been applied to this account. However, Please refer to ATC Clause No. 3.3 for the price split between the Supply and E&C portions.
2	Section 5 MATERIAL CLEARNACE DISPATCH CERTIFICATE (MDCC)	Please clarify that any delay in MDCC due to BHEL/customer review, sequencing or site readiness will result in corresponding extension of supplier delivery dates without LD.	Any delay in providing input from either the contractor or the purchaser will be addressed in accordance with the delay analysis.
3	LD – multiple units	Please define how the contract value of an individual unit will be established where common equipment, engineering, C&I, spares or common E&C items cannot be directly allocated to a unit.	If a project contains multiple units, all common items will be assigned to Unit 1.
4	Termination / LD	Please clarify the corresponding methodology for E&C and common/partially executed scope in case of termination.	Refer to Clause No. 14 (Breach of Contract, Remedies, and Termination), which covers all components of the contract and enquiry.
5	Warranty / DLP	Please clarify whether the 12-month period from Operational Acceptance can effectively shorten the warranty before completion of all PG-related activities, and define the exact certificate/date constituting “Completion of Facilities”.	Refer Amendment-01 (Commercial)
6	Latent defects	Please clarify the maximum aggregate liability period for repaired/replaced equipment and whether latent defect liability applies to all equipment or only design/material/manufacturing defects.	Refer Amendment-01 (Commercial)
7	Performance Security	Please clarify whether the Performance Security value is based on Supply + E&C + mandatory spares + testing/training , and whether it reduces progressively after completion of individual units.	Pl refer cl no. 13 of ATC, Successful bidder awarded the contract should deposit 10% of the total contract Value (Excluding Taxes) as performance security.
8	Breach of contract	Please clarify whether the 10% breach recovery is in addition to the 10% maximum LD , or whether the aggregate recovery for delay/breach is capped at 10% of contract value.	Refer to Clause No. 14 (Breach of Contract, Remedies, and Termination), which covers all components of the contract and enquiry.

SL No.	BID SPECIFICATION				Specification Requirement (as in specification)	Bidders Queries	BHEL response
	Annexure/Specification No.	Title	Clause No.	Page No.			
	Civil & Structural						
1	Annexure IV.1-1	MECHANICAL SCOPE BETWEEN BHEL AND BIDDER -DARLIPALI				Structural steel + civil design engineering & supply scope are exclusively covered in this document & no other document will be referred for same - Please confirm.	The reference annexure IV.1-1 shows broad scope. Please refer Specification in detail. Scope mentioned anywhere else in the specification is also applicable.
2	Annexure IV.1-1	MECHANICAL SCOPE BETWEEN BHEL AND BIDDER -DARLIPALI	Sl No -10 & 11	4	Foundation of RCC Pylon / RCC Pylon	The civil design of RCC pylon & civil load data preparation as input for foundation design at bottom (and top) of pylon is in Bidder Scope . Foundation design below RCC pylons is in Customer Scope. - Please confirm.	Confirmed.
3	Annexure IV.1-1	MECHANICAL SCOPE BETWEEN BHEL AND BIDDER -DARLIPALI				Area paving / grading at ACC - engineering is not in Bidder scope - Please confirm.	Bidder understanding is correct.
4	HXE-SK-2372-2 -DARLIPALI	Bid Evaluation / Loading Criteria	a)(i),(ii), (iii)	1		Reinforcement, Concrete & Formwork Quantity calculation at Bid will be done considering bottom of Pylon as 6m below ACC FGL @ RL(+) 221.5m. Whereas for pylon design at Bid - bottom of pylon to be considered as 8.5m below ACC FGL @ RL(+) 221.5m. - Please confirm.	Refer the project specific data provided in Annexure HXE-SK-2372-2 & HXE-SK-2375-2 respectively for both projects. Specification is clear in this regard.
5	HXE-SK-2372-2 -DARLIPALI	Bid Evaluation / Loading Criteria	a)(ii)	1	This Founding Level is Tentative & may vary during detail engineering stage	Bidder will not be responsible for BOQ variation , if founding level varies from that considered as stated in SL No. 4 above	Bottom of column level mentioned in Annexure HXE-SK-2372-1 & SHXE-SK-2375-1 are for bid evaluation & recovery purpose. This level is independent of founding level.
6	HXE-SK-2372-2 -DARLIPALI	Bid Evaluation / Loading Criteria		3 & 4	BOQ For Civil works of Air Cooled Condenser	The items covered under this section considers only RCC pylon. For All other civil works under Bidder scope of design & engineering per Annexure IV.1-1 MECHANICAL SCOPE BETWEEN BHEL AND BIDDER -DARLIPALI will be or not be considered for Bid BOQ by Bidder - If to be considered it will be BOQ only & not pricing - Please confirm.	For Bid evaluation, quantity of reinforcement concrete and formwork will be considered for RCC Pylon and its Top cover only. All foundations design except RCC Pylon are in bidder scope as per specification. Other Equipment foundations will not be considered for bid evaluation purpose. Specification is clear in this regard.
7	ACC Specification HES7079-REVISED-DARLIPALI	Product Purchase Specification Air Cooled Condenser Package	IV.6.6.2.1 & IV.6.6.2.2	53 & 54	Mild Steel / Medium & High Tensile Steel	Structural steel Material Specification will be according to these clauses only. - please confirm. Also, Please provide reference / specification for Hardware assembly / anchors , concrete & reinforcement.	Refer Clause IV.6.6.2.1 & IV.6.6.2.2 alongwith Annexure VII-1.
8	ACC Specification HES7079-REVISED-DARLIPALI	Product Purchase Specification Air Cooled Condenser Package	X.1.14	105	Supplier's Engineer needs to be associated during checking of final foundation before undertaking ACC erection.	Noted. Bidder Efforts for same and modifications if reqd in items under Bidder scope of engineering to be discussed between PMG teams at that time.	Noted.
9	Annexure VII-2	(Foundation system & Geotechnical data) - DARLIPALI	7.01.00	1	Bidder may refer enclosed topographical survey drawings and general layout plan along with borelogs for variation in existing ground level (EGL) / natural ground level (NGL) and finished ground level (FGL).	Topo sheet with NGL/ FGL plotted not received - please furnish. For ACC location - FGL will be considered as mentioned in SL No. 4 above.	Refer in Amendment No.1

10	Annexure VII-2	(Foundation system & Geotechnical data) - DARLIPALI	Annexure C	5		SBC values for various foundation design will be considered as mentioned in Table 1. Further pile capacity is not provided hence all foundations under Bidder scope of engineering as per Annexure IV.1-1 will be designed as open / combined /raft.Piling is not envisaged.	RCC pylon foundation design is in BHEL scope.
11	Annexure VII-1	(Specification for civil works) -DARLIPALI	D-1-6 , 6.02.08	127	These differential settlement loads shall be taken into consideration for design of footings & structures of Boiler & Mill Bunker, ESP supporting structure and Main Power House building.	Differential settlement loading need not be considered for any structure under ACC bidder scope . - please confirm	Confirmed.
12	Annexure VII-1	(Specification for civil works) -DARLIPALI				Bidder Civil & Structural Design Basis Report Document will align with this doc- Please confirm.	It should be aligned with specification HE57079 & HE57080 alongwith its Annexure VII-1 of respective projects.
13	Annexure IV.3-2	LAYOUT CONSTRAINTS - DARLIPALI				Supply scope of All parts (including hardware , embedment / insert plates) of 765 KV Phase conductor Gantry Girder, Shield Wire , rung type ladder to approach gantry, vertical cable tray along height of pylons & cable access platform at top of pylons is in Customer scope . Please confirm.	Darlipali: For mentioned items, supply & Erection by BHEL except for Gantry beams with rung type ladder and cable tray access platforms on top of ACC columns, for which supply by BHEL & Erection shall be in bidder's scope. Telangana: For mentioned items, supply & Erection by NTPC except for cable tray access platforms on top of ACC columns, for which supply by BHEL & Erection shall be in bidder's scope. Also refer specification along with Annexure IV.1-1 for complete scope details. Loading shall be considered by bidder in column design as mentioned in BHEL Specification & Layout constraints. Specification is clear in this regard.
Electricals							
14	PRODUCT PURCHASE SPECIFICATION		V	70 of 118	BHEL Scope except motors, Terminal point is at motor terminal.	HAPL Scope: Only the Motors and Electrical Load List are under HAPL's engineering and supply scope. BHEL Scope: All remaining electrical engineering and material supply activities are under BHEL's scope, including but not limited to: Power and Control Cables Cable Tray Layouts for Power and Control Cables Lighting Layout Earthing Layout Lightning Protection Layout Aviation Lighting Layout PCC, MCC, and VFD Panels MCC Room Layout Local Push Button Stations (LPBS) Cable Glands Confirm HAPL Battery Limit for Electrical Scope Work.	Noted. However, cable lugs & glands at motor terminal end shall be in bidder's scope. For battery limit, refer terminal point Annexure-IV.1-1 of specification.
Quality / Field Quality							

15	Field Quality Plan		General	Attached FQP Page	Field Quality Plan document	Pages 1–4 of the FQP covering Clauses D.1.1 to D.1.3 are not available in the tender document. Kindly provide the missing pages to enable complete review and compliance assessment.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
16	FQP / Technical Documents			Attached FQP Page	Bolt torque requirements	Kindly provide the referenced Bolt Torque Table 10.9/Document, as the same is not embedded/available in the tender document.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
17	FQP / Technical Documents			Attached FQP Page	Pressure testing requirements	Kindly provide the Pressure Test Procedure, Document No. 4410-001-110-PVM-W-008, referred to in the FQP but not included in the tender document.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
18	FQP / Technical Documents			Attached FQP Page	Vibration acceptance requirements	Kindly provide the Vibration Acceptance Document, Document No. 4410-001-110-PVM-W-002, referred to in the FQP but not included in the tender document.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
19	FQP / Technical Documents		Revision Control	Cover Page / General	FQP Rev. 03 dated 09/01/2019	Kindly confirm whether FQP Rev. 03 dated 09/01/2019 is the latest and currently applicable revision for this project. If any subsequent revision, amendment or project-specific addendum is applicable, the same may kindly be provided.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
20	SCC – Chapter VIII		8.5.1	26	Activities shall conform to the approved Field Quality Plan (FQP), as revised from time to time.	Please clarify whether the FQP will be issued by BHEL or is required to be prepared by the contractor. Please also confirm the approval authority and revision control procedure.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
21	SCC – Chapter VIII		8.2.1	Witness/Review points	Stage inspection	Kindly specify the required advance notification period for BHEL/customer stage inspections and the procedure to be followed if the inspection authority does not attend within the stipulated period.	BHEL/customer stage inspection team will be stationed at site. Witness inspection will be attended as per inspection call.
22	SCC – Chapter VIII		8.3.1	Pages 24–25	Statutory inspection	Kindly provide the detailed list of applicable statutory inspections and the responsibility matrix between BHEL and the contractor, documentation and inspection arrangements.	FQP for North Karanpura was provided solely for reference purposes. The actual FQP for Site will be prepared in consultation with the awarded vendor prior to the commencement of the ACC E&C works.
23	QA Annexure-1		8.3.2	25	Contractor shall comply with welder qualification requirements under IBR.	Please clarify whether existing valid welder qualifications approved under IBR will be accepted or whether project/site-specific qualification tests are mandatory	Bid specification requirements are clear in this regard.
Commercial							
24	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	3.1 For Supplies from within India (including E&C)	Page 2 of 42	The prices are necessarily to be quoted (as per price schedule) on "Ex-works Freight Prepaid up to site basis excluding of GST	Please confirm whether road permits/E-way bill costs, entry tax/octroi (if any in Odisha/Telangana), and any project-specific cess are included in the freight-prepaid price or reimbursable separately.	Please refer to ATC Clause No. 4.0. Only GST will be reimbursed; all other taxes and duties shall be deemed included in the quoted prices unless specifically indicated otherwise in the bidder's offer.
25	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	3.1 For Supplies from within India (including E&C)	Page 2 of 42	The prices are necessarily to be quoted (as per price schedule) on "Ex-works Freight Prepaid up to site basis excluding of GST	Freight/price escalation: Given the delivery schedule extends to Jan-2030, is any price variation clause (fuel, toll, freight indices) applicable, or is the freight-prepaid price to be treated as firm for the entire contract duration?	Please refer to ATC Clause No. 3.0. The prices must be quoted (as per price schedule) on Ex-works Freight Prepaid up to site basis excluding of GST. The Price Variation Clause (PVC) for the material supply portion shall be applicable as per ATC CI No. 3.4.1.
26	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	3.1 For Supplies from within India (including E&C)	Page 2 of 42	The prices are necessarily to be quoted (as per price schedule) on "Ex-works Freight Prepaid up to site basis excluding of GST	ODC/heavy-lift permits: For over-dimensional consignments (fan blades, tube bundle modules, structural sections), please confirm statutory ODC permit costs and route survey costs are for Bidder's account within the quoted price.	Yes

27	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	3.1 For Supplies from within India (including E&C)	Page 2 of 42	The prices are necessarily to be quoted (as per price schedule) on "Ex-works Freight Prepaid up to site basis excluding of GST	Definition of delivery term: "Ex-works Freight Prepaid up to site" is not a standard Incoterm — it mixes Ex-Works with a delivered-to-site obligation. Please confirm: does risk of loss/damage in transit rest with the Bidder until material reaches site (i.e., effectively FOR-destination), or does it transfer to BHEL at the factory gate even though the Bidder arranges and pays freight?	Please refer ATC Cl No. 8.0, Transit Insurance will be covered by BHEL under its Insurance Policy. Intimation to underwriter shall be given by supplier/vendor at the time of dispatch of each consignment. BHEL will provide details of insurance policy before start of dispatches.
28	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	3.4 PRICES & PRICE SCHEDULE	Page 3 of 42	3.4.6 Transit Insurance (both Marine & Inland) would be arranged by BHEL.	Is transit insurance for the freight-prepaid movement included in the quoted price, or to be quoted as a separate line item? If included, please confirm the insured value basis (invoice value vs. invoice + freight).	Please refer ATC Cl No. 8.0, Transit Insurance will be covered by BHEL under its Insurance Policy. Intimation to underwriter shall be given by supplier/vendor at the time of dispatch of each consignment. BHEL will provide details of insurance policy before start of dispatches.
29	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	5 MATERIAL DISPATCH CLEARANCE CERTIFICATE (MDCC):	Page 9 of 42	BHEL will issue MDCC within 7 days of receipt TCs & IR, if these are complete w.r.t. approved quality plan and comply with approved technical documents.	If BHEL does not issue MDCC within 7 days despite complete and compliant TC/COC/IR submission, is there a deemed-clearance provision, an escalation matrix, or any compensation to the Bidder for the resulting downstream schedule impact. Please confirm this delay is treated as an excusable/BHEL-attributable delay for E&C schedule.	Please refer Cl No. 5.0 of ATC, MDCC shall be issued by BHEL. No material shall be dispatched by supplier unless and until Material Dispatch Clearance Certificate (MDCC) issued by BHEL.
30	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	5 MATERIAL DISPATCH CLEARANCE CERTIFICATE (MDCC):	Page 9 of 42	Material will be dispatched by vendor/supplier	If the Supplier is unable to dispatch within 7 days of MDCC issuance (e.g., logistics/vehicle unavailability, force majeure, non-sequential hold per the clause itself), is MDCC automatically deemed lapsed requiring fresh TC/IR submission and re-approval, or can a validity extension be sought administratively without re-triggering the full documentation cycle?	Issued MDCC will be valid till dispatch of material.
31	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	9 a) SUPPLY PAYMENT (Quoted on Ex works (India) freight prepaid basis):	Page 11 of 42	Payment of 60 % of total Ex-Works Supply Price Component of the Contract Price for each identified equipment/component (excluding mandatory Spares and type tests)	What is BHEL's committed turnaround time for processing and releasing the 60% payment after submission of a compliant invoice + shipment evidence + MDCC? Please confirm whether any interest/compensation applies for delayed release beyond the committed Payment cycle time.	This is covered under Clause Nos. 9.i and 9.j of the ATC.
32	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	12 EMD (Earnest Money Deposit): Applicable	Page 18 of 42	The EMD of an amount of Rs. 3,00,00,000/- (R	Could you please confirm whether the EMD amount specified is applicable to both projects collectively, or whether a separate EMD is required for each project?	The EMD amount is applicable to the entire tender enquiry.
33	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	16 GUARANTEE/WARRANTY/ DEFECT LIABILITY PERIOD/LATENT DEFECT LIABILITY:-	Page 26 of 42	Latent Defect Liability:	Please clarify the mechanism/process for establishing that a defect manifesting years later is genuinely "inherent" rather than a consequence of operating conditions, wear, or third-party intervention over the intervening years. Who bears the burden of proof, and what technical process will be followed to adjudicate a latent defect claim?	Refer Amendment-01 (Commercial)
34	Tender Documents excluding Technical Specifications Part-2 of 3	Buyer Added Bid Specific Additional Terms & Conditions (ATC) -	43 Enclosure:	Page 41 of 42		The Bidder understands that all Annexures, Attachments, and Formats are to be duly filled in and submitted without the Company's letterhead, unless specifically stated otherwise in the respective document.	Noted.
35	Indicative vendor list	Doc No-HXE/SK/2375/3	Sub vendor items			The Bidder understands that vendors for certain major items, such as Fans/Fan Bell Assemblies, Gearboxes, LRVs, etc., are not included in the approved Sub-Vendor List.	These items are customer controlled w.r.t. vendor approval and QP approval. Bidder to propose sub-vendors for approval by BHEL & NTPC.
36		Annexure IV-4-6			Vacuum Pump	Kindly confirm whether the Bidder is required to obtain 3K (Three-Key) approval/confirmation for the proposed vacuum pump vendors.	Confirmed.

Note: The above queries shall also be applicable to the 3 × 800 MW Telangana Project.

S No.	Deviation causes	The original requirements	Reasons for Deviation	Deviation of content-Aug 20, 2026	BHEL response
1	ACC Specification HE57079-DARLIPALI-REVISED C.v) & vi)	Overload test, travel & hoist speed checks etc. shall be demonstrated as per relevant Indian standards (latest edition) for EOT craneHOT Cranes.Monorails etc.: HOT Cranes.Monorails etc.: Over load test,Travel andspeed checks functional and performance tests as per relevant Indian standards IS (latestedition)	Hoist and crane may not be manufactured in Indian, so ISO standard is easy to be followed.	HOT Cranes & Hoist test standard will follow the ISO standard.	Bidder to comply with Specification requirement.
2	ACC Specification HE57079-DARLIPALI-REVISED IV 3 .IV3.1&IV3.5	IV 3.1 The Air-Cooled Condenser shall be designed to achieve Condenser Pressure of 150 mm Hg (abs) (parameters as per annexure IV.3-1) with 5% margin on design steam flow (after considering fouling resistance) measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 MW output under rated steam condition, zero make-up (MU) and ambient temperature of 40 C condition, considering pressure drop in Hot Box as per clause IV.3.5. IV.3.5 Pressure drop value from Turbine Exhaust Flange to inlet of ACC duct (refer AnnexureIV.4-1), is 5.95 mmHg at 840 MW output under rated steam condition, zero make-up (fordata refer Annexure IV.3-1). Exit loss from entry to ACC duct at connection with Hot boxand beyond shall be considered by Bidder. In case actual pressure drop inside hot box isdifferent from the value provided by Employer, suitable correction shall be applicable.Bidder shall design ACC suitably to achieve guaranteed condenser pressure as perclause IV.3.1.		As per bidder understanding, ACC design pressure at design/supply interface between hotbox and ACC inlet steam duct is 150mm Hg.	Bidder understanding is incorrect. Gauranteed Back Pressure is 150mmhg abs and shall be measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 output under rated steam condition, zero make-up and ambient temperature of 40 deg C condition. Bidder to consider the pressure drop across Hotbox (from Turbine Exhaust Flange to inlet of ACC duct) in design of ACC in line with technical specifiication requirement. Hot Box is not in Bidder scope of supply.
3	ACC Specification HE57079-DARLIPALI-REVISED IV 3 .IV3.12	IV.3.12 ASME PTC 30.1 should be followed for reporting thermal performance characteristics of mechanical draft air-cooled steam condensers (ACC) operating under vacuum conditions. The condenser vacuum shall be measured with a vacuum grid utilizing ASME basket tips. The grid is fitted at 300 mm downstream of LP turbine exhaust connection. Bidder shall provide all necessary blanking arrangement for leakage testing. Individual street isolation valve shall be provided for leakage detection and repair work.	ACC 's individual street isolation valves is used to reduce ACC's heat exchanger surface to protect ACC from freezing during ambient temperature below zero, so the isolation valves for individual street is not applied for this project.	Site Min. ambient temperature is above 0 degree, street isolation valves are no usefull.	Bidder to comply with specification requirement.. Also refer IV.4.2.5.9 of HE57079
4	ACC Specification HE57079-DARLIPALI-REVISED IV 3 .IV3.17	IV.3.17 All high points in the piping system shall be provided with vents. All low points shall be provided with drains. Piping for the drains shall be routed up to the nearest drain trench as per layout.	Due to pressure in piping system is lower than atmospheric pressure. So the venting is not applied for high point for piping.	High point in ACC system will not be provided with vents.	For Vacuum Line, venting provsion at high point of the all piping not required. However, Vents shall be provided at high points where air/gas pockets may form as per technical specification requirement. All low points shall be provided with drains. Piping for the drains shall be routed up to the nearest drain trench as per layout.
5	ACC Specification HE57079-DARLIPALI-REVISED IV 3 .IV3.36	IV.3.36 ACC supporting super structure (RCC) shall be designed by the Bidder based on working stress method for (1) structural steel as per IS 800 & for (ii) RCC pylon as per IS 4998 & CICIND model code and RCC foundation as per IS 456.	IS standard is not very familiar to Bidder and Bidder is more familiaer with GB RCC design standard.	ACC RCC design will follow GB or equivalent AISC or ACI standard.	Limit state method has been specified. Bidder to comply with specification requirement. Bidder shall comply with specification requirement with respect to standards mentioned.

6	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.2.5.9	IV.4.2.5.9 Motorized Butterfly valves (sectionalizing valves) to isolate each street on steam side, condensate side & vacuum side of ACC for maintenance of individual A frame tube bundles without Unit trip and capability of ACC to operate in cold weather conditions and low load conditions as per HEI without formation of Dead Zone to be provided. The valves shall meet the requirement as specified in Annexure IV.4-7. Type test of these valves shall be conducted as specified in the Annexure IV.4-7. One set of seal rings for each unit to be provided / supplied as commissioning spares.	ACC 's individual street isolation valves is used to reduce ACC's heat exchanger surface to protect ACC from freezing during ambient temperature below zero, so the isolation valves for individual street is not applied for this project.	Site Min. ambient temperature is above 0 degree, street isolation valves are no usefull.	Bidder to comply with specification requirement.
7	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.2.5.10	IV 4.2.5.10 Proper approach and permanent access cum maintenance platform for all the bellows/expansion joints of ACC duct to be provided. Clear width of min. 1200mm all around the bellows/expansion joints to be provided at these platforms. Bidder shall consider the Load on structure due to movement of expansion joints during maintenance. Proper approach and permanent access cum maintenance platform for all the	There is no need for routine maintenance, these parts are all welding to steam ducts. Maintance platforms for bellows and expansion joint are not necessary for ACC.	There is no need for routine maintenance, these parts are all welding to steam ducts. Maintance platforms for bellows and expansion joint are not necessary for ACC.	Bidder to comply with specification requirement.
8	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.3.15	IV 4.3.15 Drain pump data Type :Vertical, Multi-stage Centrifugal, Canister, diffuser type pumps; Design flow rate:771 t/h (for 2x100%) or 514 t/h(for 3x100%) Design Standard :HIS	Drain pump' s pump head is not very high, so the single stage is enough, and horizontal type is suitable for low NPSHr. The drain pump controis water level high -switch open, water low low-switch off, the pump desig flow rate is no need so high, 180 t/h flow rate is enough for this project. As the pumps will be purchased outside of Indian, so the design standard shall be ISO.	Drain pump type is single -stage , horizontal type pump. The design flow rate is ~180t/h (2x100%) ,which is sufficient for operation (including start-up,normal ,shut-up) . Design standard shall be ISO instead of HIS.	Bidder to comply with specification requirement.
9	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.4.3	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The thickness of the aluminium layer on the CS base tube plate shall not be less than 50pm; the total thickness of this cladde plate shall not be less than 1.2 mm. Base tube shall be finned with aluminium fins brazed to the tubes, the fin thickness after manufacturing of tube bundle shall be more than or equal to 0.20 mm.	As pe decades years of proven practice,for A type force air ACC, the total thickness of this cladde plate min.thickness is not less than 1.35mm, the fin thickness is not less than 0.23mm.	As pe decades years of proven practice,for A type force air ACC, the total thickness of this cladde plate min.thickness is not less than 1.35mm, the fin thickness is not less than 0.23mm. There is no negative tolerance.	Refer Amendment No. 01. Bidder to provide thickness as per their proven design/practices meeting the minimum requirements mentioned in the Amendment No.1.
10	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.4.8	Air Tightness test of each tube bundle shall be carried out at a pressure as per ASME Sec VIII Div, 1 i.e. minimum 1.1 times of design pressure. Alternatively, vacuum drop test on the tube bundle shall be conducted as per approved procedure.	ACC tube bundle is not pressure vessel , as their operation condition is under vacuum. The pressure for air tightness test of bundles is 0.5 bar(g) instead of 1.1 times of design pressure. Vacuum drop test for ACC bundles is not normal test items. As air tightness test is enough to tightness test.	ACC tube bundle is not pressure vessel , as their operation condition is under vacuum. The pressure for air tightness test of bundles is 0.5 bar(g) instead of 1.1 times of design pressure. There is no vacuum drop test for ACC signal row bundle.	Bidder to comply with specification requirement.

11	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.1.20	IV.4.5.1.20 Type test of Fan using scaled down model or full-size model (applicable for the project) for performance, noise and vibration at full speed, 110%, 75%, 50% and 25% speed shall be conducted as per procedure. The test of Fan shall be witnessed by Employer. Procedure of testing to be submitted to Employer. A scaled down model test of the fan offered shall be carried out by the contractor at the fan supplier test facility or at any other identified/ recognized fan test facility to establish the rated parameters, efficiency, power consumption etc. of the fan. Scale of model shall be minimum 1:10. The test should be carried out prior to start of manufacturing of the fan and shall be conforming to requirement of ANSI/ AMCA A 210 or equivalent code.	There is no minimum 1:10 scale of model test to be witnessed from fan supplier side. Fan model shall be less than this 1:10 scale from fan suppliers' information. It is not suitable to do the vibration and noise test from small scale model test.	There is no minimum 1:10 scale of model test to be witnessed from fan supplier side. Fan model shall be less than this 1:10 scale from fan suppliers' information. It is not suitable to do the vibration and noise test from small scale model test.	Bidder to comply with specification requirement.
12	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.1.21	IV.4.5.1.21 Performance test (including flow, pressure, noise, vibration & alignment etc.) of fan shall be tested at site.	Fan performance (air flow rate , pressure) at site can not be measured accurately. As dimension fan area is very big and air blockage from structure, it is difficult to test these two fan parameters at site.	Fan performance (air flow rate , pressure) at site can not be measured accurately. As dimension fan area is very big and air blockage from structure, it is difficult to test these two fan parameters at site.	Bidder to comply with specification requirement.
13	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.2.1	IV.4.5.2.1 The gearbox matched with the fan shall be of parallel vertical shaft helical gear type. Design rating of the gear box shall be arrived at after considering a service factor of minimum 3.0 according to the rotating speed on the motor nameplate rating. In selecting the gear box design rating the thermal derating effects at 50 degree C shall also be considered. Detailed gear box sizing calculation shall be furnished for Employer's/Owner's approval during detailed engineering. In no case the design thermal rating of the gear box shall be less than 125% of the name plate KW rating of the selected drive motor. Also, the mechanical rating shall be checked so that minimum 25% margin is available at Pull Out Torque of the motor.	1)As per CTI standard, The value of ACC gearbox service factor based on motor nameplate rating is Min.2.0 instead of 3.0. 2) The thermal derating effect is based on 45 °C is suitable and enough based on site Max. ambient temperature. If selecting 50 °C ,gearbox size will be too large. 3) For ACC for A frame type , force air type. the cold air cool the gearbox at same time, the gearbox thermal rating is 100% of name plate of motor. min.125% of motor name plate rating will lead gearbox size too big.	1)As per CTI standard, The value of ACC gearbox service factor (AGMA) based on motor nameplate rating is 2.0 instead of 3.0. 2) The thermal derating effect is based on 45 °C is suitable and enough based on site Max. ambient temperature. If selecting 50 °C ,gearbox size will be too large. 3) For ACC for A frame type , force air type. the cold air cool the gearbox at same time, the gearbox thermal rating is 100% of name plate of motor. Min.125% of motor name plate rating will lead gearbox size too big.	Bidder to comply with specification requirement.
14	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.2.4	IV.4.5.2.4 Gearbox to operate for 100,000 hours before major repair or replacement. Reverse fan rotation is not foreseen. All the bearings in the gearbox shall be designed for a life of 100,000 hours.	As per gearbox supplier and ACC supplier best practice. The gearboxes shall be designed for a minimum calculated life of 100000 hours at full load, full speed operation. The gearbox shall use anti-friction bearings with metal cage. Bearings of output shaft shall have a life (DIN ISO 281) of 100000 hours. Bearings of input shaft shall be designed for 50000 hours .	As per gearbox supplier and ACC supplier best practice. The gearboxes shall be designed for a minimum calculated life of 100000 hours at full load, full speed operation. The gearbox shall use anti-friction bearings with metal cage. Bearings of output shaft shall have a life (DIN ISO 281) of 100000 hours. Bearings of input shaft shall be designed for 50000 hours .	Bidder to comply with specification requirement.
15	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.2.8	IV.4.5.2.8 Testing of gearbox (1 No.) shall be conducted at the thermal rating at 125% of motor rating at manufacturer's own or any third-party testing facility to demonstrate its thermal performance. Type test of Gear Box is in Bidder scope.	1) The gearbox thermal rating is based on calculation , there is no test facility to simulate the so high load and control ambient temperature. 2) The thermal rating for gearbox is 100% , please refer to item 13.	1) The gearbox thermal rating is based on calculation , there is no test facility to simulate the so high load and control ambient temperature. 2) The thermal rating for gearbox is 100% , please refer to item 13.	Bidder to comply with specification requirement.

16	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.5.2.21	IV.4.5.2.21 The gear box shall be provided with Dust proof breather plug, low oil level switch, Lube oil sight glass, Lube oil drain cock with drain hose connection, Fan reverse rotation backstop, Double oil shaft seals and dipstick assembly for oil level monitoring, lube oil sump temperature measurement device, lube oil pressure switch, Fan & motor to gear box coupling.	1) The ACC gearbox applies the oil pressure switch in lube oil piping instead of oil level switch, as Oil is transferred by pump in piping system ,oil pressure switch is direct instrument to protect the gearbox. The oil switch is not directly used to protect gearbox. 2) If fan motor is connected by D.O.L , gearbox is usefull to stop fan reversal rotation and it is very hard to start up. But for VFD controlled fan motor, fan will be stopped by VFD, then start correct rotation. So the backstop is no need for VFD fan motor.	1) The ACC gearbox applies the oil pressure switch in lube oil piping instead of oil level switch, as oil is transferred by pump in piping system ,oil pressure switch is direct instrument to protect the gearbox. The oil switch is not directly used to protect gearbox. 2) If fan motor is connected by D.O.L , gearbox is usefull to stop fan reversal rotation and it is very hard to start up. But for VFD controlled fan motor, fan will be stopped by VFD, then start correct rotation. So the backstop is no need for VFD fan motor.	Bidder to comply with specification requirement.
17	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.6.4	IV.4.6.4 Condensate tank shall be designed as per ASME Sec VIII, Div1.	The whole ACC design is not pressured vessel, the tank working pressure is under vacuum condtion. ASME Sec VIII, Div1. standard is used to design pressured vessel , as it will not be applied for tank design.	The whole ACC design is not pressured vessel, the tank working pressure is under vacuum condtion. ASME Sec VIII, Div1. standard is used to design pressured vessel , as it will not be applied for tank design.	Bidder to comply with specification requirement.ACC Condensate tank shall be designed for both positive pressure and under vacuum condition.
18	ACC Specification HE57079-DARLIPALI-REVISED IV 4 IV 4.10.20	IV.4.10.20 Vibration sensors shall be provided in Motor DE & NDE and Fan/Pump DE/ NDE bearing as a minimum for all Major/ HT drives as per OEM's standard and proven practice. Vendor shall provide 2 vibration sensors per measurement location.		1) Please clarify whether for the motor's DE& NDE and pump's DE& NDE ,vibration transmitters are all to be installed. 2) Please clarify if the vaccum pump motor is LT type ,whehter the vibration transmitters are necessary or not ?	1) Confirmed, Vibration transmitters are required for the motor's DE& NDE and pump's DE& NDE as per technical specification requirement for HT drive motors. 2). Motor type may be HT/LT as per motor rating as per technical specification. In case of HT Motors, specification requirement as in S.No.1 above shall prevail.
19	ACC Specification HE57079-DARLIPALI-REVISED IV 6	IV 4.14 Handling systems (EOT crane, Monorail and Hoist for Vacuum pump, Drain pump, Fan/Gearbox/Motor, Expansion Joints.)	For Expansion joint is welded on steam duct, it doesn't need handing system. For routine maintance, expansion joint will be not considered. In Normal ACC system,there is no hoist or crane for expansion joint.	For Expansion joint is welded on steam duct, it doesn't need handing system.	For Expansion joints located above ground levels, handling system is to be provided in line with specification requirement. Bidder to design exhaust duct in such a manner to minimize/eliminate the expansion in Duct Risers. However, Expansion Joints at ground level maintenance can be handled with mobile crane. Approach and accessiblity requirement for all expansion joints and bellow shall prevail in line with <u>specification requirement</u> .
20	ACC Specification HE57079-DARLIPALI-REVISED VI 7.2.7 e.	IV 7.2.7 e.100% Air tightness test of tube bundles at a pressure of 1.1 times the design internal pressure or vacuum drop test shall be conducted.		Refer to item 10, air tightness test pressure shall be 0.5 bar(g).	Bidder to comply with specification requirement.
21				For material code of Steel Strucutre, can Chinese GB standard material be accepted or not ?	Other International/ National standards such as DIN, VDI, BS, GOST etc. shall also be accepted for only material codes and manufacturing standards, subject to the Owner's approval, for which the Bidder shall furnish, adequate information to justify that these standards are equivalent or superior to the standards mentioned above. In case, the owner is not satisfied with proposed grade, mentioned grade or equivalent higher grade shall be taken without any cost implication.
22				For material code of Duct& piping, can Chinese GB standard material be accepted or not ?	
23				For material code of motor ,fan ,and other equipment ,can Chinese GB standard material be accepted or not?	

24				For motor, fan, and other equipment, can Chinese local brand be accepted or not ?	Vendor approval shall be taken from BHEL/NTPC. Proposed vendor may be accepted or rejected based on vendor assesment . In case, Vendor rejected after assesment, equipment shall be supplied from approved vendor without any cost implication.
25	Annexure IV.4-9 THERMAL INSULATION- DARLIPALI	For all Piping / SG / TG systems and the equipment with surface operating temperature of 60 deg.C and above, thermal insulation shall be applied for heat conservation and/or personnel protection such that the temperature of protective cladding shall not exceed 60 deg.C. Insulation thickness shall be calculated based on the following design data & methodology:		The safety fence will be considered around the steam ducts where personnel can reach instead of piping insulation.	For ground duct only, safety fence or barricading can be provided in line with specification (Refer Cl. IV.4.22). Bidder to comply with specification.

S No.	Deviation causes	The original requirements	Reasons for Deviation	Deviation of content-Aug 20, 2026	BHEL response
1	ACC Specification HE57080- TELANGANA- REVISED C.v)& vi)	Overload test, travel & hoist speed checks etc. shall be demonstrated as per relevant Indian standards (latest edition) for EOT craneHOT Cranes.Monorails etc.: HOT Cranes.Monorails etc.: Over load test,Travel andspeed checks functional and performance tests as per relevant Indian standards IS (latestedition)	Hoist and crane may not be manufactured in Indian, so ISO standard is easy to be followed.	HOT Cranes & Hoist test standard shall follow the ISO standard.	Bidder to comply with Specification requirement.
2	ACC Specification HE57080- TELANGANA- REVISED IV3.1&IV3.5	IV 3.1 The Air-Cooled Condenser shall be designed to achieve Condenser Pressure of 150 mm Hg (abs) (parameters as per annexure IV.3-1) with 5% margin on design steam flow (after considering fouling resistance) measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 MW output under rated steam condition, zero make-up (MU) and ambient temperature of 40 C condition, considering pressure drop in Hot Box as per clause IV.3.5. IV.3.5 Pressure drop value from Turbine Exhaust Flange to inlet of ACC duct (refer AnnexureIV.4-1), is 5.95 mmHg at 840 MW output under rated steam condition, zero make-up (fordata refer Annexure IV.3-1). Exit loss from entry to ACC duct at connection with Hot boxand beyond shall be considered by Bidder. In case actual pressure drop inside hot box isdifferent from the value provided by Employer, suitable correction shall be applicable.Bidder shall design ACC suitably to achieve guaranteed condenser pressure as perclause IV.3.1.		As per bidder understanding, ACC duct inlet design pressure at interface between hotbox and ACC inlet steam duct is 150mm Hg.	Bidder understanding is incorrect. Gauranteed Back Pressure is 150mmhg abs and shall be measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox at 840 output under rated steam condition, zero make-up and ambient temperature of 40 deg C condition. Bidder to consider the pressure drop across Hotbox (from Turbine Exhaust Flange to inlet of ACC duct) in design of ACC in line with technical specifiication requirement. Hot Box is not in Bidder scope of supply.
3	ACC Specification HE57080- TELANGANA- REVISED IV3.12	IV.3.12 ASME PTC 30.1 should be followed for reporting thermal performance characteristics of mechanical draft air-cooled steam condensers (ACC) operating under vacuum conditions. The condenser vacuum shall be measured with a vacuum grid utilizing ASME basket tips. The grid is fitted at 300 mm downstream of LP turbine exhaust connection. Bidder shall provide all necessary blanking arrangement for leakage testing. Individual street isolation valve shall be provided for leakage detection and repair work.	ACC 's individual street isolation valves is used to reduce ACC's heat exchanger surface to protect ACC from freezing during ambient temperature below zero, so the isolation valves for individual street is not applied for this project.	Site Min. ambient temperature is above 0 degree, street isolation valves are no usefull.	Bidder to comply with specification requirement.. Also refer IV.4.2.5.9 of HE57080
4	ACC Specification HE57080- TELANGANA- REVISED IV3.17	IV.3.17 All high points in the piping system shall be provided with vents. All low points shall be provided with drains. Piping for the drains shall be routed up to the nearest drain trench as per layout.	Due to pressure in piping system is lower than atmospheric pressure. So the venting is not applied for high point for piping.	High point in system shall be not provided with vents.	For Vacuum Line, venting provsion at high point of the all piping not required. However, Vents shall be provided at high points where air/gas pockets may form as per technical specification requirement. All low points shall be provided with drains. Piping for the drains shall be routed up to the nearest drain trench as per layout.
5	ACC Specification HE57080- TELANGANA- REVISED IV3.36	IV.3.36 ACC supporting super structure (RCC) shall be designed by the Bidder based on working stress method for (1) structural steel as per IS 800 & for (ii) RCC pylon as per IS 4998 & CICIND model code and RCC foundation as per IS 456.	IS standard is not very familiar to Bidder and Bidder is more familiar with GB RCC design standard.	ACC RCC design shall follow GB or equivalent AISI or ACI standard.	Refer Amendment 01. Limit state method shall be applicable for both Darlipalli & Telangana.

6	ACC Specification HE57080- TELANGANA- REVISED IV 4.2.5.9	IV.4.2.5.9 Motorized Butterfly valves (sectionalizing valves) to isolate each street on steam side, condensate side & vacuum side of ACC for maintenance of individual A frame tube bundles without Unit trip and capability of ACC to operate in cold weather conditions and low load conditions as per HEI without formation of Dead Zone to be provided. The valves shall meet the requirement as specified in Annexure IV.4-7. Type test of these valves shall be conducted as specified in the Annexure IV.4-7. One set of seal rings for each unit to be provided / supplied as commissioning spares.	ACC 's individual street isolation valves is used to reduce ACC's heat exchanger surface to protect ACC from freezing during ambient temperature below zero, so the isolation valves for individual street is not applied for this project.	Site Min. ambient temperature is above 0 degree, street isolation valves are no usefull.	Bidder to comply with specification requirement.
7	ACC Specification HE57080- TELANGANA- REVISED IV 4.2.5.10	IV 4.2.5.10 Proper approach and permanent access cum maintenance platform for all the bellows/expansion joints of ACC duct to be provided. Clear width of min. 1200mm all around the bellows/expansion joints to be provided at these platforms. Bidder shall consider the Load on structure due to movement of expansion joints during maintenance. Proper approach and permanent access cum maintenance platform for all the	There is no need for routine maintenance, these parts are all welding to steam ducts. Maintance platforms for bellows and expansion joint are not necessary for ACC.	There is no need for routine maintenance, these parts are all welding to steam ducts. Maintance platforms for bellows and expansion joint are not necessary for ACC.	Bidder to comply with specification requirement.
8	ACC Specification HE57080- TELANGANA- REVISED IV 4.3.15	IV 4.3.15 Drain pump data Type :Vertical, Multi-stage Centrifugal, Canister, diffuser type pumps; Design flow rate:771 t/h (for 2x100%) or 514 t/h(for 3x100%) Design Standard :HIS	Drain pump' s pump head is not very high, so the single stage is enough, and horizontal type is suitable for low NPSHr. The drain pump controis water level high -switch open, water low low- switch off, the pump desig flow rate is no need so high, 180 t/h flow rate is enough for this project. As the pumps will be purchased outside of Indian, so the design standard shall be ISO.	Drain pump type is single -stage , horizontal type pump. The design flow rate is ~180t/h (2x100%) ,which is sufficient for operation (including start-up,normal ,shut-up) . Design standard shall be ISO instead of HIS.	Bidder to comply with specification requirement.
9	ACC Specification HE57080- TELANGANA- REVISED IV 4.4.3	Materials of construction for tubes shall be Aluminium clad (from outside) carbon steel plates. The thickness of the aluminium layer on the CS base tube plate shall not be less than 50pm; the total thickness of this cladde plate shall not be less than 1.2 mm. Base tube shall be finned with aluminium fins brazed to the tubes, the fin thickness after manufacturing of tube bundle shall be more than or equal to 0.20 mm.	As pe decades years of proven practice,for A type force air ACC, the total thickness of this cladde plate min.thickness is not less than 1.35mm, the fin thickness is not less than 0.23mm.	As pe decades years of proven practice,for A type force air ACC, the total thickness of this cladde plate min.thickness is not less than 1.35mm, the fin thickness is not less than 0.23mm. There is no negative tolerance.	Refer Amendment No. 01. Bidder to provide thickness as per their proven design/practices meeting the minimum requirements mentioned in the Amendment No.1.
10	ACC Specification HE57080- TELANGANA- REVISED IV 4.4.8	Air Tightness test of each tube bundle shall be carried out at a pressure as per ASME Sec VIII Div, 1 i.e. minimum 1.1 times of design pressure. Alternatively, vacuum drop test on the tube bundle shall be conducted as per approved procedure.	ACC tube bundle is not pressure vessel , as their operation condition is under vacuum. The pressure for air tightness test of bundles is 0.5 bar(g) instead of 1.1 times of design pressure. Vacuum drop test for ACC bundles is not normal test items. As air tightness test is enough to tightness test.	ACC tube bundle is not pressure vessel , as their operation condition is under vacuum. The pressure for air tightness test of bundles is 0.5 bar(g) instead of 1.1 times of design pressure. There is no vacuum drop test for ACC signle row bundle.	Bidder to comply with specification requirement.

11	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.1.20	IV.4.5.1.20 Type test of Fan using scaled down model or full-size model (applicable for the project) for performance, noise and vibration at full speed, 110%, 75%, 50% and 25% speed shall be conducted as per procedure. The test of Fan shall be witnessed by Employer. Procedure of testing to be submitted to Employer. A scaled down model test of the fan offered shall be carried out by the contractor at the fan supplier test facility or at any other identified/ recognized fan test facility to establish the rated parameters, efficiency, power consumption etc. of the fan. Scale of model shall be minimum 1:10. The test should be carried out prior to start of manufacturing of the fan and shall be conforming to requirement of ANSI/ AMCA A 210 or equivalent code.	There is no minimum 1:10 scale of model test to be witnessed from fan supplier side. Fan model shall be less than this 1:10 scale from fan suppliers' information. It is not suitable to do the vibration and noise test from small scale model test.	There is no minimum 1:10 scale of model test to be witnessed from fan supplier side. Fan model shall be less than this 1:10 scale from fan suppliers' information. It is not suitable to do the vibration and noise test from small scale model test.	Bidder to comply with specification requirement.
12	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.1.21	IV.4.5.1.21 Performance test (including flow, pressure, noise, vibration & alignment etc.) of fan shall be tested at site.	Fan performance (air flow rate , pressure) at site can not be measured accurately. As dimension fan area is very big and air blockage from structure, it is difficult to test these two fan parameters at site.	Fan performance (air flow rate , pressure) at site can not be measured accurately. As dimension fan area is very big and air blockage from structure, it is difficult to test these two fan parameters at site.	Bidder to comply with specification requirement.
13	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.2.1	IV.4.5.2.1 The gearbox matched with the fan shall be of parallel vertical shaft helical gear type. Design rating of the gear box shall be arrived at after considering a service factor of minimum 3.0 according to the rotating speed on the motor nameplate rating. In selecting the gear box design rating the thermal derating effects at 50 degree C shall also be considered. Detailed gear box sizing calculation shall be furnished for Employer's/Owner's approval during detailed engineering. In no case the design thermal rating of the gear box shall be less than 125% of the name plate KW rating of the selected drive motor. Also, the mechanical rating shall be checked so that minimum 25% margin is available at Pull Out Torque of the motor.	1)As per CTI standard, The value of ACC gearbox service factor based on motor nameplate rating is Min.2.0 instead of 3.0. 2) The thermal derating effect is based on 45 °C is suitable and enough based on site Max. ambient temperature. If selecting 50 °C ,gearbox size will be too large. 3) For ACC for A frame type , force air type. the cold air cool the gearbox at same time, the gearbox thermal rating is 100% of name plate of motor. min.125% of motor name plate rating will lead gearbox size too big.	1)As per CTI standard, The value of ACC gearbox service factor (AGMA) based on motor nameplate rating is 2.0 instead of 3.0. 2) The thermal derating effect is based on 45 °C is suitable and enough based on site Max. ambient temperature. If selecting 50 °C ,gearbox size will be too large. 3) For ACC for A frame type , force air type. the cold air cool the gearbox at same time, the gearbox thermal rating is 100% of name plate of motor. Min.125% of motor name plate rating will lead gearbox size too big.	Bidder to comply with specification requirement.

14	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.2.4	IV.4.5.2.4 Gearbox to operate for 100,000 hours before major repair or replacement. Reverse fan rotation is not foreseen. All the bearings in the gearbox shall be designed for a life of 100,000 hours.	As per gearbox supplier and ACC supplier best practice. The gearboxes shall be designed for a minimum calculated life of 100000 hours at full load, full speed operation. The gearbox shall use anti-friction bearings with metal cage. Bearings of output shaft shall have a life (DIN ISO 281) of 100000 hours. Bearings of input shaft shall be designed for 50000 hours .	As per gearbox supplier and ACC supplier best practice. The gearboxes shall be designed for a minimum calculated life of 100000 hours at full load, full speed operation. The gearbox shall use anti-friction bearings with metal cage. Bearings of output shaft shall have a life (DIN ISO 281) of 100000 hours. Bearings of input shaft shall be designed for 50000 hours .	Bidder to comply with specification requirement.
15	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.2.8	IV.4.5.2.8 Testing of gearbox (1 No.) shall be conducted at the thermal rating at 125% of motor rating at manufacturer's own or any third-party testing facility to demonstrate its thermal performance. Type test of Gear Box is in Bidder scope.	1) The gearbox thermal rating is based on caculation , there is no test facility to simulate the so high load and control ambient temperature. 2) The thermal rating for gearbox is 100% , please refer to item 13.	1) The gearbox thermal rating is based on caculation , there is no test facility to simulate the so high load and control ambient temperature. 2) The thermal rating for gearbox is 100% , please refer to item 13.	Bidder to comply with specification requirement.
16	ACC Specification HE57080- TELANGANA- REVISED IV 4.5.2.21	IV.4.5.2.21 The gear box shall be provided with Dust proof breather plug, low oil level switch, Lube oil sight glass, Lube oil drain cock with drain hose connection, Fan reverse rotation backstop, Double oil shaft seals and dipstick assembly for oil level monitoring, lube oil sump temperature measurement device, lube oil pressure switch, Fan & motor to gear box coupling.	1) The ACC gearbox applies the oil pressure switch in lube oil piping instead of oil level switch, as Oil is transferred by pump in piping system ,oil pressure switch is direct instrument to protect the gearbox. The oil swich is not directly used to protect gearbox. 2) If fan motor is connected by D.O.L , gearbox is usefull to stop fan reversal rotation and it is very hard to start up. But for VFD controlled fan motor, fan will be stopped by VFD, then start correct rotation. So the backstop is no need for VFD fan motor.	1) The ACC gearbox applies the oil pressure switch in lube oil piping instead of oil level switch, as Oil is transferred by pump in piping system ,oil pressure switch is direct instrument to protect the gearbox. The oil swich is not directly used to protect gearbox. 2) If fan motor is connected by D.O.L , gearbox is usefull to stop fan reversal rotation and it is very hard to start up. But for VFD controlled fan motor, fan will be stopped by VFD, then start correct rotation. So the backstop is no need for VFD fan motor.	Bidder to comply with specification requirement.
17	ACC Specification HE57080- TELANGANA- REVISED IV 4.6.4	IV.4.6.4 Condensate tank shall be designed as per ASME Sec VIII, Div1.	The whole ACC design is not pressured vessel, the tank working pressure is under vacuum condition. ASME Sec VIII, Div1. standard is used to design pressured vessel , as it will not be applied for tank design.	The whole ACC design is not pressured vessel, the tank working pressure is under vacuum condition. ASME Sec VIII, Div1. standard is used to design pressured vessel , as it will not be applied for tank design.	Bidder to comply with specification requirement.ACC Condensate tank shall be designed for both positive pressure and under vacuum condition as per specification.

18	ACC Specification HE57080- TELANGANA- REVISED IV 4.10.20	IV 4.10.20 Vibration sensors shall be provided in Motor DE & NDE and Fan/Pump DE/ NDE bearing as a minimum for all Major/ HT drives as per OEM's standard and proven practice. Vendor shall provide 2 vibration sensors per measurement location.		1) Please clarify whether for the motor's DE& NDE and pump's DE& NDE ,vibration transmitters are all to be installed. 2) Please clarify if the vacuum pump motor is LT type ,whether the vibration transmitters are necessary or not ?	1) Confirmed, Vibration transmitters are required for the motor's DE& NDE and pump's DE& NDE as per technical specification requirement for HT drive motors. 2). Motor type may be HT/LT as per motor rating as per technical specification. In case of HT Motors, specification requirement as in S.No.1 above shall prevail.
19	ACC Specification HE57080- TELANGANA- REVISED IV 4.14	IV 4.14 Handling systems (EOT crane, Monorail and Hoist for Vacuum pump, Drain pump, Fan/Gearbox/Motor, Expansion Joints .	For Expansion joint is welded on steam duct, it didn't need handling system. For routine maintenance, expansion joint will be not considered. In Normal ACC system, there is no hoist or crane for expansion joint.	For Expansion joint is welded on steam duct, it didn't need handling system.	For Expansion joints located above ground levels, handling system is to be provided in line with specification requirement. Bidder to design exhaust duct in such a manner to minimize/eliminate the expansion in Duct Risers. However, Expansion Joints at ground level maintenance can be handled with mobile crane. Approach and accessibility requirement for all expansion joints and below shall prevail in line with specification requirement.
20	ACC Specification HE57080- TELANGANA- REVISED VI 7.2.7 e.	IV 7.2.7 e.100% Air tightness test of tube bundles at a pressure of 1.1 times the design internal pressure or vacuum drop test shall be conducted.		Refer to item 10, air tightness test pressure shall be 0.5 bar(g).	Bidder to comply with specification requirement.
21				For material code of Steel Structure, can GB standard material be accepted or not ?	Other International/ National standards such as DIN, VDI, BS, GOST etc. shall also be accepted for only material codes and manufacturing standards, subject to the Owner's approval, for which the Bidder shall furnish, adequate information to justify that these standards are equivalent or superior to the standards mentioned above. In case, the owner is not satisfied with proposed grade, mentioned grade or equivalent higher grade shall be taken without any cost implication.
22				For material code of Duct& piping, can GB standard material be accepted or not ?	
23				For material code of motor ,fan ,and other equipment ,GB standard material can be accepted?	
24				For motor, fan, and other equipment, can Chinese local brand be accepted or not ?	Vendor approval shall be taken from BHEL/NTPC. Proposed vendor may be accepted or rejected based on vendor assessment . In case, Vendor rejected after assessment, equipment shall be supplied from approved vendor without any cost implication.
25	Annexure IV.4-9 THERMAL INSULATION- TELANGANA	For all Piping / SG / TG systems and the equipment with surface operating temperature of 60 deg.C and above, thermal insulation shall be applied for heat conservation and/or personnel protection such that the temperature of protective cladding shall not exceed 60 deg.C. Insulation thickness shall be calculated based on the following design data & methodology:		The safety fence will be considered around the steam ducts where personnel can reach instead of piping insulation.	For ground duct only, safety fence or barricading can be provided in line with specification (Refer Cl. IV.4.22). Bidder to comply with specification.

Sl.No.	Pre-Bid Query	BHEL response
1	1. "Fans shall be capable of operating at 110% of their design operating speeds" In the specification "Fans shall be capable of operating at 110% of their design operating speeds" Should the variable-frequency fan consider operating at 110%? And does the motor need to meet the power requirements at 110% rotational speed?	As per specification, all the fans shall be capable of operating at 110% of their design operating speeds. Also refer clause no. IV.4.5.1.20 of specification. Motor shall be designed / selected as per HEI/BHEL specification.
2	2. 3x800MW Telangana, Please provide the centerline spacing of the exhaust steam for the 3x800MW power plant in Telangana.	Refer Annexure IV.3-2 & Annexure IV.4-1 of specification. Centerline of Hotbox/ETD already provided. Duct system in Bidder's scope. Centreline of ground duct shall be in bidder's design scope and Duct System shall be supply along with expander/transition piece for connection of Hotbox/ETD with Duct by bidder.
3	3. Can the materials for steam duct, steel structures and equipment be of Chinese standard materials?	Other International/ National standards such as DIN, VDI, BS, GOST etc. shall also be accepted for only material codes and manufacturing standards, subject to the Owner's approval, for which the Bidder shall furnish, adequate information to justify that these standards are equivalent or superior to the standards mentioned above. In case, the owner is not satisfied with proposed grade, mentioned grade or equivalent higher grade shall be taken without any cost implication.
4	4. The maximum drainage volume of the drainage expansion vessel to the drainage tank?	Refer Annexure IV.3-1, IV.3-4, IV.3-8. System drains flow to drain tank has been indicated as per HBDs. Bidder shall consider quantity of self condensation over and above the indicated maximum flow for sizing of drain tank. However, sizing of drain tank shall be done in line with HEI.
5	5. Is the first oiling of the reducer part of the delivery scope? "Is the initial oil fill for the gearbox included in the scope of supply?"	Bidder to refer CI IV.2.12. First fill and refill of gear box oil shall be under bidder's scope. Refills for one year of operation shall also be in bidder's scope. Refills for one year of operation as specified elsewhere in this specification. Bidder to comply.
6	HXE-SK-2375-2 clause 1(b) seems to imply that loading would be applicable only if quoted Guaranteed Power Consumption by a Bidder is greater the 9632KW. Kindly confirm our understanding.	HXE-SK-2372-2 for Darlipalli & HXE-SK-2375-2 for Telangana have been revised with Rev. 01. Refer Amendment No. 1.
7	HXE-SK-2375-2 clause 1(b) makes reference to "adjustment rate for transformer feeder". However, no where else is any adjustment rate for transformer feeder has been mentioned. Kindly clarify. We understand that this should instead refer to liquidated damages rate for guaranteed power consumption i.e. USD 10,050 per KW. Kindly confirm.	HXE-SK-2372-2 for Darlipalli & HXE-SK-2375-2 for Telangana have been revised with Rev. 01. Refer Amendment No. 1.
8	HE57079 Clause III.2 Liquidated Damages mentions a Limiting Value as "Not more than 9632KW". We understand that this means that any Liquidated Damages would be levied only if actual auxiliary power consumption is recorded higher than 9632KW? Kindly confirm that our understanding is correct. Kindly confirm that it does not mean that the ACC would be "rejected" if the recorded aux. power is more than 9632KW.	Specification is clear in this regard. Bidder to thoroughly review Section-III "Functional Guarantees and Liquidated Damages" of HE57079 for Darlipali & HE57080 for Telangana.
9	For Telangana project specifically, we understand that the limit value/ base value of 9632KW refers to aux. power consumption per unit and NOT three units. Kindly confirm for avoidance of any misunderstanding.	Bidders understanding is correct. Refer Amendment No. 1.

SL. NO.	ENQUIRY SPECIFICATION				SPECIFICATION REQUIREMENT	COMMENTS / CLARIFICATIONS	BHEL response
	PART	Annexure name	PAGE NO.	CLAUSE NO.			
COMMERCIAL							
1		ATC	3 of 42	3.4.6	Transit Insurance (both Marine & Inland) would be arranged by BHEL.	Transit Insurance (both Marine & Inland) would be arranged by BHEL for both ex W Price and FOR Price. Kindly reconfirm for clarity.	Refer cl no. 8 of ATC, Transit Insurance include both Marine & Inland will be covered by BHEL under its Insurance Policy. Intimation to underwriter shall be given by supplier/vendor at the time of dispatch of each consignment. BHEL will provide details of insurance policy before start of dispatches.
2		ATC	6 of 42	4.2.16	In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only.	In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only or approved extended schedule for the reason solely attributable to BHEL in accordance with Clause 40 (3) of ATC.	Clarification sought by bidder is duly addressed as per following Clause of ATC: 1. As per Cl No. 4.2.16 of ATC Variation in Taxes & Duties: <i>Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability.</i> <i>In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only.</i> <i>In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.</i> 2. The following is already specified in ATC Cl No. 40 (3): <i>"Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected."</i>
3		ATC	10 of 42	5	Material to be dispatched sequentially as per erection requirement. In case, Material is nonsequential as per erection requirement, BHEL/End customer shall reserve the right to hold the dispatches/MDCC for non-sequential supplies.	Material to be dispatched sequentially as per erection requirement and in accordance with Project Schedule / Delivery Completion Period as per Clause 7 of ATC. In case, Material is nonsequential as per erection requirement, BHEL/End customer shall reserve the right to hold the dispatches/MDCC for non-sequential supplies.	Bidder to follow T&C written in the enquiry.
4		ATC	71	7	Contract Period	Please include the Schedule (Month from Zero Date) for the following activities:- Start of Pylon Foundation Completion of Pylon Foundation and handover to the Supplier for Start of ACC erection	BHEL will provide the erection front (Pylon Foundation) and other input as per enquiry before the scheduled erection start month. Pl refer ATC Cl No. 7 for ACC Erection start month from the Zero Date.

5		ATC	11 of 42	7(a)	NOTE: a). If the delivery of supply gets delayed beyond the contractual delivery period, BHEL at its discretion may extend the Contract with or without LD based on the merit of the case. However, if any 'Delivery extension' is granted to the Supplier/Vendor for completion of supply, due to delay attributable to the Supplier/Vendor, then it shall be without prejudice to the rights of BHEL to impose LD for the delays attributable to the Supplier/Vendor.	Refer SI No 16 & 17	Bidder to follow T&C written in the enquiry.
6		ATC	11 of 42	9 (a)	SUPPLY PAYMENT (Quoted on Ex works (India) freight prepaid basis): 60% pro rata Ex W 20% pro rata on receipt of equipment at site 7% on air tightness test 7% on completion of trial run 6% on completion of PG test	Bidder proposes the following:- 10% interest free advance against submission of ABG of equivalent amount valid till the Supply Completion period plus one month claim period. ABG will be reduced quarterly with respect to the deliveries already completed. 60% pro rata Ex W without deduction, after adjustment of Advance Payment 20% pro rata on receipt of equipment at site without deduction, after adjustment of Advance Payment 3% on air tightness test 3% on completion of trial run 4% on completion of PG test	Bidder to follow T&C written in the enquiry.
7		ATC	12 of 42	9. (a) Note	In case PG test/ demonstration test of the system/ package, as applicable cannot be completed within one year after completion of Trial run, for reasons not attributable to the contractor, payment for PG Test/ demonstration test of the system/ package for respective unit, as applicable can be released on submission of BG of equivalent amount, valid initially for 6 months & to be revalidated till completion of PG test/ demonstration test of the system/ package, as applicable. However, contractor has to fulfil all formalities for final billing/ contract closing, prior to drawing this payment.	In case PG test/ demonstration test of the system/ package, as applicable cannot be completed within six months after completion of Trial run, for reasons not attributable to the contractor, payment for PG Test/ demonstration test of the system/ package for respective unit, as applicable can be released on submission of BG of equivalent amount, valid initially for 3 months & to be revalidated till completion of PG test/ demonstration test of the system/ package, as applicable. However, contractor has to fulfil all formalities for final billing/ contract closing, prior to drawing this payment.	Bidder to follow T&C written in the enquiry.
8		ATC	13 of 42	9. (c)	80% pro rata on progressive erection 7% on air tightness test 7% on completion of trial run 6% on completion of PG test	Bidder proposes the following:- 90% pro rata on progressive erection, without deduction 3% on air tightness test 3% on completion of trial run 4% on completion of PG test	Bidder to follow T&C written in the enquiry.
9		ATC	14 of 42	9 (h) (a)	The break-up thus submitted shall be approved by BHEL. Supply BBU along with BOM to be submitted within three months from date of LOI to BHEL Haridwar and E&C BBU to be submitted to BHEL Site within 05 month from LOI.....	Bidder proposes changes as below - The break-up thus submitted shall be approved by BHEL. Supply BBU along with BOM to be submitted and approved within three months from date of LOI to BHEL Haridwar and E&C BBU to be submitted to BHEL Site and approved within 05 month from LOI.....	Bidder to follow T&C written in the enquiry.
10		ATC	15 of 42	9(i)	i) Payment Timeline Non MSME 90 days	Bidder requests to consider 45 days from submission of original Invoice along with supporting documents complete in all aspects as per terms and conditions of Purchase Order. No loading ob the bid price will be applicale	Bidder to follow T&C written in the enquiry.
11		ATC	16 of 42	9(l)	l) Provision of Advance Payment: The advance payment will be Interest Bearing and the rate of Interest would be @ Repo Rate (on he date of release of advance) + 4% for the period of advance sought by bidder.	Bidder requests to consider advance payment maximum upto 10% of the contract value as an interest free advance.	Bidder to follow T&C written in the enquiry.

12		ATC	20 of 42	13.2	Performance Security is to be furnished within 30 days after issuance of Contract/PO and should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the Supplier/Vendor, including Guarantee/Warranty/Defect Liability obligations.	Bidder proposes changes as below - Performance Security is to be furnished within 30 days after issuance of Contract/PO and should remain valid for a period of 60 (sixty) days beyond the date of expiry of ~~completion of all contractual obligations of the Supplier/Vendor, including~~ Guarantee/Warranty/Defect Liability obligations.	Bidder to follow T&C written in the enquiry.
13		ATC	20 of 42	13.5	Performance Security shall be refunded to the Supplier/Vendor without interest, after the Supplier/Vendor duly performs and completes the contract in all respects but not later than 60(sixty) days of completion of all such obligations including the warranty under the contract.	Performance Security shall be refunded to the Supplier/Vendor without interest, after the Supplier/Vendor duly performs and completes the contract in all respects but not later than 60(sixty) days of completion of Guarantee/Warranty/Defect Liability obligations.	Bidder to follow T&C written in the enquiry.
14		ATC	24 of 42	16 (2)	The Defect Liability Period shall be eighteen (18) months from the date of Completion of the Facilities or twelve (12) months from the date of Operational Acceptance of the Facilities, whichever first occurs, -Completion of facilities is defined as completeness of erection of contractor scope equipment's in all respect and Trial operation (full load for 72 hours) of the main plant has been achieved.	Please add at the end: In case the Completion of Facilities is delayed for reasons not attributable to the Bidder, the Guarantee/Warranty/Defect Liability period will be reckoned from the date of last Completion of Supplies.	Refer Amendment-01 (Commercial)
15		ATC	25 of 42	16 (7)	...However, Defect Liability Period for such repaired /replaced Facilities or any part thereof shall not be extended by more than a period of 36 months from Completion of Facilities and 30 months from Operational acceptance whichever is earlier excluding the period during which such facility could not be used due to the aforesaid defect....	...However, Defect Liability Period for such repaired /replaced Facilities or any part thereof shall not be extended by more than a period of 36 months from Completion of Facilities / Date of reckoning of Guarantee/Warranty/Defect Liability period and 30 months from Operational acceptance whichever is earlier excluding the period during which such facility could not be used due to the aforesaid defect....	Refer Amendment-01 (Commercial)
16		ATC	27 of 42	18 (a)	LD on Main Supply- Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages if dispatch/delivery of the package (Main supply) is delayed beyond the contractual completion date or extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent and GST thereon (as applicable), of the total contract price (Main Supply) per week or part thereof, limited of ten (10)percent of the total contract price (Main Supply) excluding GST.	Bidder requests to delete this provision	Bidder to follow T&C written in the enquiry.

17		ATC	27 of 42	18 (b)	b. LD on Erection & Commissioning - Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages if E&C completion of the package is delayed beyond the contractual completion date or extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent and GST thereon (as applicable), of the total contract price of (supply+E&C) per week or part thereof, limited to ten (10) percent of the total contract price (supply+E&C) excluding GST. Total LD (Main Supply and E&C) shall be limiting to 10% of cumulative total contract price (Main Supply + E&C) excluding GST.	b. LD on Completion of Facilities - Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages if E&C completion of the package is delayed beyond the contractual completion date or extension thereof as per the period stipulated in the Order/ Contract and not by way of penalty, a sum equivalent to half (½) percent ~~and GST thereon (as applicable)~~, of the unexecuted portion of the total contract price of (supply+E&C) per week or part thereof, limited to five (5) percent of the unexecuted portion of the total contract price (supply+E&C) excluding GST. Total LD (~~Main Supply and~~ E&C) shall be limiting to 5% of unexecuted portion of the total contract price (Main Supply + E&C) excluding GST. Liquidated Damages for delay shall be recovered from final stage payments only.	Bidder to follow T&C written in the enquiry.
18		ATC	94	37	BHEL will arrange the approval of the drawings/data sheets/ documents within 30 days of their receipt provided those are complete in all respect as per specification requirements. In case of any delay on account of BHEL in document approval, delivery shall be re-scheduled accordingly.	Bidder proposes changes as below - BHEL will arrange the approval of the drawings/data sheets/ documents within ~~30~~ 14 days of their receipt provided those are complete in all respect as per specification requirements. Any comments from BHEL shall be provided within 14 days and after submission incorporating compliance, approval/ comments to be arranged within 7 days from its revised submissions respectively. In case of any delay on account of BHEL in document approval, delivery shall be re-scheduled accordingly.	Bidder to follow T&C written in the enquiry.
19		ATC	100 & 101	41 (a) & (h)	Receipt, unloading, storage of materials at site, security of the same round-the-clock & loading / unloading / transportation of materials to different erection locations is included in the scope of the bidder. Necessary manpower for all these activities will be made available by bidder at site from the date of opening of site office until closure of the project	Bidder requests to consider provision - The storage and pre-assembly area shall be provided within the plant at a distance of 5 km from the designated plant area. In the event that such storage area is not available or is allotted beyond the aforesaid distance, all associated cost implications, including the risk relating to the Materials, shall be to BHEL's account. Also propose to include "Any additional costs incurred, if any, for maintaining resources at site due to delay in civil handover beyond the stipulated period, including any delay not attributable to the Supplier, shall be reimbursed to the Supplier."	Bidder to follow T&C written in the enquiry.
20		ACC/Darlipali&Telangana/PVC	147		f is Exchange Rate Correction Factors for the respective materials with reference the currency of Contract, such that $f = Z_0 / Z_1$	Bidder requests for clarification - If the supply is in Ex-Works basis or from within India whether "f" is still applicable	Bidder to follow T&C written in the enquiry.

21	GISTC for Indian Bidders		Please add "Suspension by Purchaser"	Bidder requests to include provisions of "SUSPENSION" - The Purchaser may, by notice to the Contractor which shall not be less than 60 days, order the Contractor to suspend performance of any or all of its obligations under the Contract. Such notice shall specify the obligation of which performance is to be suspended, the effective date of the suspension and the reasons thereof. The Contractor shall there upon suspend performance of such obligation (except those obligations necessary for the care or preservation of the Equipment or part thereof) until ordered in writing to resume such performance by the Purchaser. If, by virtue of a suspension order given by the Purchaser, other than by reason of the Contractor's default or breach of the Contract, the Contractor's performance of any of its obligations is suspended for an aggregate period of more than ninety (90) days, then at any time thereafter and provided that at that time such performance is still suspended, the Contractor may give a notice to the Purchaser requiring that the Purchaser shall, within twenty-eight (28) days of receipt of the notice, order the resumption of such performance or request and subsequently order a change excluding the performance of the suspended obligations from the Contract. If the Purchaser fails to do so within such period, the Contractor may, by a further notice to the Purchaser elect to treat the suspension, where it affects a part only of the Equipment, as a deletion of such part or, where it affects the whole of the Equipment, (Termination for Purchaser's Convenience). If (a) The Purchaser fails to pay the Contractor any sum due under the Contract within the specified period, fails to approve any invoice or supporting documents without just cause pursuant to the Contract Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Purchaser that requires payment of such sum, requires approval of such invoice or supporting documents, or specifies the breach and requires the Purchaser to remedy the same as the case maybe.	Bidder to follow T&C written in the enquiry.
22	GISTC for Indian Bidders		Please add "Suspension by Contractor"	If (a) the Purchaser has failed to pay the Contractor any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to the Contract Agreement, or commits a substantial breach of the Contract, the Contractor may give a notice to the Purchaser that requires payment of such sum, requires approval of such invoice or supporting documents, or specifies the breach and requires the Purchaser to remedy the same, as the case may be. If the Purchaser fails to pay such sum, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, or fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Contractor's notice or (b) the Contractor is unable to carry out any of its obligations under the Contract for any reason attributable to the Purchaser, including but not limited to the Employer's failure to provide possession of or access to the Site or other areas , or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities; then the Contractor may by fourteen (14) days' notice to the Employer suspend performance of all or any of its obligations under the Contract, or reduce the rate of progress. If the Contractor's performance of its obligations is suspended or the rate of progress is reduced pursuant to this Clause , then the Time for Completion shall be extended and any and all additional costs or expenses incurred by the Contractor as a result of such suspension or reduction shall be paid by the Purchaser to the Contractor in addition to the Contract Price, except in the case of suspension order or reduction in the rate of progress by reason of the Contractor's default or breach of the Contract. The Bank Guarantee Charges and Insurance Charges for the extended period shall be reimbursed at actuals based on the written request of Contractor.	Bidder to follow T&C written in the enquiry.
23	GISTC for Indian Bidders		Please add "Limitation of Liability"	Except in cases of criminal negligence or willful misconduct, the aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to any obligation of the Contractor to indemnify BHEL with respect to patent infringement.	Refer Amendment-01 (Commercial)

24	GISTC for Indian Bidders			Please add "Variation of Scope of Work" -	Bidder requests to include provisions of "Variation of Scope of Work" - Any variation, addition, omission, modification or deviation from the scope, specifications, quantities, design, drawings or other requirements of the Contract shall be subject to the prior written instruction and approval of BHEL. Any resulting adjustment to the Contract Price and/or Delivery Period shall be mutually agreed by the Parties before implementation. The Contractor shall not be obliged to execute any such variation or deviation without such written instruction and agreement, except where otherwise expressly provided under the Contract.	The bidder's scope shall be in line with the specification requirements.
25	GISTC for Indian Bidders				Bidder requests to include provisions - Subcontractor: The Contractor shall not engage any Subcontractor for execution of any part of the Scope without the prior written consent of the Purchaser. The Contractor shall submit the details and relevant documents of the proposed Subcontractor to the Purchaser for approval. The Purchaser shall provide its approval or comments within thirty (30) days from receipt of complete information and documents.	Bidders to refer HXE-SK-2372-1 (Annexure-3a) and HXE-SK-2375-1 (Annexure-3a) for Darlipali and Telangana respectively.
26	GISTC for Indian Bidders	268	19 (6)	BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed shortclosure after 1 year of imposition of Force Majeure	Bidder proposes changes as below - ~~BHEL at its discretion~~ Parties may consider short closure of contract after ~~1 year~~ 6 months of imposition of Force Majeure in line with extant guidelines. ~~In any case, Supplier/Vendor cannot consider deemed shortclosure after 1 year of imposition of Force Majeure~~	Bidder to follow T&C written in the enquiry.
27	GISTC for Indian Bidders	269 - 271	23	SETTLEMENT OF DISPUTE/ ARBITRATION	Bidder requests change in provision of Arbitration as - Any dispute/difference arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration under the Arbitration and Conciliation Act, 1996 ("ACT") by a Sole Arbitrator to be appointed with mutual consent of the parties. Such Sole Arbitrator shall be either a retired judge of Supreme Court or High Court or District Court of India or some Advocate having practiced in Indian Courts. The seat or place of arbitration shall be New Delhi, India. The language to be used in the arbitration shall be English. The governing law of the contract shall be the substantive law of India. In case the parties fail to agree on the appointment of arbitrator within 1 month of the notice invoking arbitration by one party, then the arbitrator shall be appointed in accordance with the Arbitration and Conciliation Act, 1996.	Bidder to follow T&C written in the enquiry.
28	GISTC for Indian Bidde	307	24	JURISDICTION The Court situated at Haridwar shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.	Bidder propose changes - The courts of New Delhi, India, shall have exclusive jurisdiction.	Bidder to follow T&C written in the enquiry.
TECHNICAL						
1	ACC Specification HES7080- TELANGANA- REVISED	Page 7 of127	III.1.1 g	...PG test equipment being supplied, installed and commissioned for each unit (3 Units for Telangana TPP) shall be retained by owner after completion of PG test....	Bidder has considered one set of instruments for PG test on one unit. Same shall be used for other two units. BHEL to confirm the same.	Bidder to comply wiith specification .

2		ACC Specification HE57080- TELANGANA- REVISED	Page 7 of127	III.1.1 g	...All PG test process parameters shall be made available in DDCMIS....	BHEL to clarify this point.	Bidder to comply with specification requirements.
3		ACC Specification HE57080- TELANGANA- REVISED	Page 10 of127	III.1.2 a. i)	...measured at 300 mm downstream of 1st welding joint of turbine exhaust & Hotbox...	BHEL to ensure Sufficient access for provision of mounting the connection of measuring instruments (pressure and temperature) at 300 mm downstream of 1st welding joint of turbin exhaust & hotbox. Otherwise the location for the connection of the measuring instruments (pressure and temperature) shall be decided mutually at accessible location.	Noted.
4		ACC Specification HE57080- TELANGANA- REVISED	Page 12 of127	III.2 - 1 & 2	#VALUE!	BHEL to specify the acceptable limit under which plant will be accepted eventhough LD is applied.	Bidder shall make efforts in line with Clause III.1.1 k of HE 57079/57080 for Performance Tests of the Equipments. If the performance guarantee(s) specified at clause III.1.2 of the specification are not met by the Bidder even after the modifications and/or replacements, Owner/Purchaser will accept the equipment/system only after levying liquidated damages against the Bidder, at the rates listed under Cl. III. 2 "Liquidity Damages". Such liquidated damages shall be deducted from the Contract Price. However, Bidder's aggregate liability to pay liquidated damages for failure to attain the functional guarantee shall not exceed Twelve percent (12%) of the Contract Price.
5		ACC Specification HE57080- TELANGANA- REVISED	Page 16 of127	IV.1 - xxxi	1 No. acoustic device and 1 No. thermographic camera to cater the requirement.	BHEL to provide the technical requirement for Accoustic device and thermographic camera. Also we have not envisaged any connection with DDCMIS for these instruments. BHEL to confirm	Additional Annexure with typical datasheet for the instruments has been provided in Amendment 01. Typical datasheet shall be used for bidding pupose. However, the specification shall be finalised after award during detailed engineering. No connection for DDCMIS is required for the referred instruments.
6		ACC Specification HE57080- TELANGANA- REVISED	Page 18 of127	IV.2.9	... 1 No. interconnection platform between TG building and staircase towards A-Row will be provided by BHEL. Bidder to consider the load on the staircase due to the same in design during detailed engineering.	BHEL to provide not to exceed load on the staircase.	Refer Amendment No. 1.

7		ACC Specification HE57080- TELANGANA- REVISED	Page 12 of 127	IV.3.6	... Following characteristic curves of ACC shall be provided: i. Steam Flow Vs ACC Back Pressure for entire range of ambient temperature. ii. Steam Flow Vs ACC Back pressure under different operating conditions (VWO, TMCR, HPLP Bypass operation, House load operation etc.) iii. ACC Back pressure Vs Fan power/Number of Fans for Steam flow of 105% TMCR with 0% make-up at design condenser pressure (i.e. Guarantee HBO for Condenser pressure) at different ambient air temperature. The Characteristic curve for case (iii) to be developed for following conditions: a. All fans (including VFD) operating at 100% of rated speed. b. All VFD fans operating at minimum speed with sequential OFF of single speed fans. c. All VFD fans operating at an intermediate average speed between full rated speed and minimum speed with sequential OFF of single speed fans. Note: 1) While developing curves for conditions at (b) and (c) above, first the VFD fans speed reduction shall be considered, after that sequential OFF of single speed fans shall be considered. 2) Further the equation for total fan power including single speed drive and VFD fans shall be furnished for cases conditions (a), (b) & (c) above. 3) The ACC back pressure corresponding to fans under operation shall be extended at least up to worst design condenser pressure.	For iii. Bidder request for the deviation. Instead Bidder will provide the fan control steps.	Bidder to comply with specification .
8		ACC Specification HE57080- TELANGANA- REVISED	Page 24 of 127	IV.3.22	... Walkway width for access of expansion joints shall be decided based on the size of expansion joint from handling point of view.	Bidder requests deviation for walkway for excess of expansion joint as maintenance is not required for expansion joints.	Bidder to comply with specification .
9		ACC Specification HE57080- TELANGANA- REVISED	Page 27 of 127	IV.4.2.1	The exhaust steam pipeline system refers to the pipelines (Towards A-row) between outlet of ETD/Hotbox as described under clause IV.4.1 under LP cylinder of steam turbine (Terminal point as per Annexure IV.4-1) and steam distributing ducts connected to each row of ACCs as well as sliding/fixed supports.....pressure relief valve.... etc.	Bidder clarifies that no pressure relief valve are envisaged in Exhaust steam duct. Instead rupture disc are considered. BHEL to confirm	Noted.
10		ACC Specification HE57080- TELANGANA- REVISED	Page 30 of 127	IV.4.2.8	All the erectable tonnage needs to be supplied by the Bidder in fabricated condition. For large diameter Duct greater than 3 meters, rolled section welded with their stiffeners and with edge preparation to be dispatched in maximum 3 number circumferential parts each of minimum 2.5 meters width. For duct diameter equal to or less than 3 meters, the length of parts shall be minimum 10 meters except make-up pieces. Efforts shall be made to reduce number of site erection joints.	Bidder requests deviation for prefabricated duct and proposes duct fabrication at site.	Bidder to comply with specification .
11		ACC Specification HE57080- TELANGANA- REVISED	Page 48 of 127	IV.4.14	Handling systems (EQT crane, Monorail and Hoist for Vacuum pump, Drain pump, Fan/Gearbox/Motor, Expansion Joints .	Handling arrangement of expansion joint is not required as expansion joints do not require maintenance. Bidder requests deviation for the hoist and handling arrangement for expansion joint.	Bidder to comply with specification .
12		ACC Specification HE57080- TELANGANA- REVISED	Page 53 of 127	IV.4.22	Thermal insulation to be provided in individual condensate header of each street , condensate piping, drain piping, tanks, deaerator, piping from duct to drain tank, duct up to 2.5m (or barricaded with chains)....	Bidder request deviation to provide insulation on condensate header.	Refer Amendment No. 1.
13		ACC Specification HE57080- TELANGANA- REVISED	Page 53 of 127	IV.4.21	Erection Elevator	BHEL to provide technical specification of Erection elevators.	Erection elevator is in bidder's scope.

14		ACC Specification HE57080- TELANGANA- REVISED	Page 11 of 127	III. 1.2 - c - i	Max. Oxygen content of Condensate is to be less than 0.015 cc/ltr. over the entire load range as per HEI.	BHEL to inform the minimum and maximum loads.	Bidder to comply with specification .
15		DARLIPALLI			Height and distance of Conveyor system from ACC in Darlipalli	Please inform the same	For Darlipalli, refer Annexure-AMD01-01.
16					In Darlipalli tentative dimensions for ACC is mentioned as 140 metres X 150 metres	Please confirm which side is 140 metres. Also please inform the maximum available dimensions as per site layout.	Refer Amendment No. 1.
17	1	ACC_Specification_HE57080-TELANGANA-REVISED.pdf	Page 107 of 127	VII.2(a)	VII.2(a) Design / analysis software (PPS HE 57080 — structural) The Bidder must furnish the STAAD-input file and detailed load breakup for the ACC steel structure. If the Bidder uses software other than Staad Pro, that is acceptable provided proper validation is carried out and a licensed copy (1 No.) of the software is supplied to BHEL without limitation of time duration for BHEL's use The software requirement is mandatory for review and will be retained by BHEL.	Bidder will do the Civil Engineering using the following software. 1. Robot Structural Analysis (Autodesk). 2. SAP2000 BHEL to specify the time duration for which software use has to be granted for BHEL use as it cannot be without limitation of time duration. This is because softwares are subscription based and have to be renewed every year.	Refer Amendment No. 1.
18	Darlipalli	ACC Specification HE57079- REVISED- DARLIPALI	Page 45 of 118	IV.4.14	Handling systems (EOT crane, Monorail and Hoist for Vacuum pump, Drain pump, Fan/Gear-box/motor, expansion joints)	1. Bidder understands that the handling arrangement only for the convolutes of the expansion joint. BHEL to confirm. 2. BHEL has not indicated the unloading area for expansion joints in the layout drawing. BHEL to provide the same to decide the configuration of the handling arrangement.	1. Handling arrangement shall be provided in line with the specification. For Expansion joint, Handling arrangement shall be provided as per expansion joint supplier recommendation, whether convolutions or complete expansion joint to be replaced. 2. Unloading shall be done for all expansion joints at one place in each unit. Location will be finalised during detailed engineering.
19	Telangana	ACC Specification HE57080- TELANGANA- REVISED	Page 48 of 127	IV.4.14	Handling systems (EOT crane, Monorail and Hoist for Vacuum pump, Drain pump, Fan/Gear-box/motor, expansion joints)	1. Bidder understands that the handling arrangement only for the convolutes of the expansion joint. BHEL to confirm. 2. BHEL has not indicated the unloading area for expansion joints in the layout drawing. BHEL to provide the same to decide the configuration of the handling arrangement.	1. Handling arrangement shall be provided in line with the specification. For Expansion joint, Handling arrangement shall be provided as per expansion joint supplier recommendation, whether convolutions or complete expansion joint to be replaced. 2. Unloading shall be done for all expansion joints at one place in each unit. Location will be finalised during detailed engineering.
20	Telangana	ACC Specification HE57080- REVISED- Telangana	Page 39 of 127	IV.4.5.1.24	Additional spacer rings shall be provided for 20% of the total fans per unit during erection.	Additional spacer rings, if applicable for bidder's design, shall be provided for 20% of the total fans per unit during erection. Kindly confirm.	Refer Amendment No. 1.
21	Telangana	ACC Specification HE57080- REVISED- Telangana	Page 40 of 127	IV.4.5.2.3	The gear drive shall be of spiral bevel or worm type.	The gear drive shall be of spiral bevel or worm type or helical type. Kindly confirm	Refer Amendment No. 1.
22	Telangana	ACC Specification HE57080- REVISED- Telangana	Page 48 of 127	IV.4.15.1	The complete system shall consist of high pressure pumps including electric motor, motor control centre, local panel,	The complete system shall consist of high pressure pumps including electric motor, ~~motor control centre~~ , local panel. Kindly confirm.	Bidder to comply with specification requirements. However, power supply shall be done through BHEL Motor Control Center.

S No.	Queries raised by vendors	BHEL response
1	Prospective vendor has submitted comments on the draft EMD BG format. Please review the attached draft and confirm whether the proposed changes are acceptable or not.	EMD Bank Guarantee format must adhere to the details specified (Annexure-16 of ATC) in the enquiry.
2	Please inform whether the vendor can submit the EMD Bank Guarantee through the following bank is acceptable or not. Branch Name : SOUTH EXTENSION BRANCH Bank Address : HSBC, F-43 SOUTH EXTENSION PART 1, NE049, INDIA IFSC Code (for RTGS /NEFT) : HSBC0110004 MICR Code : 110039004 HSBC Swift ID : HSBCINBB	Hongkong and Shanghai Banking Corporation Ltd is part of consortium bank list (Annexure-18 of ATC).
3	The Annexure IV.3-2 shows the layout constraints and their dimensions (L X W). However, the height is not mentioned. Can you please give us the height of 1.ACC Bldg 1 2.ACC Bldg 2 3.Space for CPU service vessel 4.HV transformer below ACC shed 5.CPU regeneration unit We need the data for both Darlipali and Telangana please.	Refer Amendment No. 01 for height of buildings under ACC.