Notice for Inviting Expression of Interest (EOI) to undertake Construction of Coal Shed

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BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Notice for Inviting Expression of Interest

For

Identifying Agencies

For

Construction of Coal Shed at 2X660 MW Talcher Project

Issued by:
BHEL PSWR
Power Sector - Western Region
345-Kingsway, Nagpur-440001

(hereinafter referred to as 'BHEL')

Registered Office at
Bharat Heavy Electricals Limited
BHEL House, Siri Fort New Delhi-110049

INDIA

EOI No: BHEL/PSWR/PMX/COAL-SHED/001

Date of Issue: 09/11/2022

Last date for submission of EOI response:23/11/2022

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DISCLAIMER

All information contained in this Expression of Interest (EOI) are in good interest and faith. The information contained in this EOI document and the information/clarification subsequently provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of BHEL does not alter the terms and conditions set out in this EOI.

The purpose of this EOI is to identify prospective Agencies for Engineering, Procurement and Construction of Coal Shed of Thermal Power Plant. This EOI is not an offer by BHEL to the prospective Applicant(s) or any other person. This EOI is neither intended nor shall it be construed as creating or requiring any ongoing or continuing relationship or commitment with any party or person. This is not an offer or invitation to enter into an agreement of any kind with any party.

Though adequate care has been taken in the preparation of this EOI document, the interested firms shall satisfy itself that the document is complete in all respects. The information is not intended to be exhaustive. Interested Agencies are required to make their own enquiries and assumptions wherever required. Intimation of discrepancy, if any, should be given to the specified office immediately. If no intimation is received by this office by the date mentioned in the document, it shall be deemed that the EOI document is complete in all respects and firms submitting their interest are satisfied with the EOI Document in all respects.

The issue of this EOI does not imply that BHEL is bound to select and shortlist Applicant(s) or to enter into any agreement(s) with any Applicant(s). BHEL reserves all right to reject any application submitted in response to this EOI document at any stage without assigning any reasons thereof. BHEL also reserves the right to withhold or withdraw the process at any stage. Neither BHEL, nor its employees and associates will have any liability on any loss, expense or damage which may arise from or be incurred or suffered in connection with this EOI. BHEL accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance/use of any statements/information contained in this EOI by the Applicant. BHEL is not making any representation or warranty, express or implied, as to the accuracy or completeness of any information/statements made in this EOI.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Application including but not limited to preparation, copying, postage, delivery, fees, expenses associated with site visit or any demonstrations or presentations which may be required by BHEL or any other costs incurred in connection with or relating to its Application. All such costs and expenses will remain with the Applicant and BHEL shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Application, regardless of the conduct or outcome of the EOI.

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1.0 About Bharat Heavy Electricals Limited

Established in 1964, Bharat Heavy Electricals Limited (BHEL) is the largest engineering and manufacturing enterprise in India in the energy and infrastructure sector with the capability to manufacture the entire range of power plant equipment.

BHEL caters to core sectors like Power Generation, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas, Water, Defence & Aerospace, and e-Mobility & Energy Storage Solutions, and has references in 82 countries across the globe. BHEL's mammoth size of operations is evident from its widespread network of 17 Manufacturing Units, 2 Repair Units, 4 Regional Offices, 8 Service Centres, 1 Subsidiary, 3 Overseas Offices, 5 Joint Ventures, 15 Regional Marketing Centres and more than 150 project sites across India and abroad.

More details about the entire range of BHEL's products and operations can be obtained by visiting our web site **www.bhel.com**.

2.0 EoI process:

Through this EOI, BHEL intends to identify interested and capable agencies from India and Abroad for Engineering and Execution of coal shed of Thermal Power Plants thru Engineering, Procurement and Construction (EPC) basis. Interested and capable agencies having proven technology and experience, are requested to submit their response along with documents latest by **23/11/2022**.

3.0 Project Information:

S. No.	Description	Details
1	Project Title	2x660 MW Talcher Thermal Power Station
2	Customer	National Thermal Power Corporation Limited (NTPC Limited)
3	Location	The proposed site is at a distance of about 4 km from Talcher town and about 25 km from district headquarters Angul in Odisha state, India.
4	Nearest Railway Station	Talcher is on Talcher-Cuttack section of North Eastern Railway (renamed East Coast Railway) at about 2 Km. However, a small railway station named 'Talcher Thermal' is located near project boundary.

5	Nearest Airport	Bhubaneshwar (5approx. 150Km by road)
6	Access By Road/Major Cities	The area is accessible by NH-23 (renamed NH-149) at about 1 km.
7	Temperature	Mean of daily minimum temperature = 15.1°C Mean of daily maximum temperature = 39.8°C
8	Seismic Zone	The project site lies in zone III as defined in IS: 1893.
9	Wind Speed	Design wind speed is 50 m/sec as per IS: 875 Part III

4.0 Broad scope of work/Job:

The scope of work comprises of Design, Engineering, Procurement, Fabrication, Manufacturing, Supply, Transportation, Pre-assembly, Erection, Painting, Inspection & Testing of an over ground structural shed (Coal stockyard Shed) for entire length of track hopper and machinery hatches at 2x660 MW Talcher Thermal Power Station.

Coal Stockyard shall be covered with structural shed all along the coal heap. Adequate clearance to be provided with shed or structural member of Shed from extreme moving structural members of Stacker cum Reclaimer in any direction. Provisions shall be kept for Dozer entry into the shed & exit from shed and for the Dozer movement all along inside the Covered shed. Coal Stockyard shed complete with all mechanical, electrical, civil and structural works shall be in the scope of agency.

Drawing No.: 4540-XXX-POC-A-016 is attached.

Structural shed over stock pile area:

Space frame Structure for stockpile area shall cover the complete stockpile area. The structure shall have suitable arrangement for fixing of solar panel and its auxiliaries over its surface. Walkway at the regular interval and staircases (at every 100 m interval along the length of the shed and on both side) shall be provided for the maintenance of solar panels. Maintenance walkway shall also be provided inside the stockpile area. The complete structure shall be covered with cladding as mentioned elsewhere in specifications. However, on the both sides, till 2.1 m for NGL, structure may be left open. Polycarbonate sheet of 2 mm thick for 5% of the total area shall be provided for skylight in the matching profile.

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Structural steel pipes/tubes to be used shall be electric resistance or induction butt welded (ERW) as per IS 1161/1239/3589/4923. Bolts shall be high tensile bolts as per IS 1363/1364 of minimum 10.9 grade. Pipes shall be designated by their normal bore. These shall be light, medium or heavy as specified depending upon the wall thickness. Pipes shall be clean finished and reasonably free from scale. They shall be free from cracks, surface flaws, lamination and other defects. The ends shall be cut clean and square with axis of the pipe unless otherwise required per design/drawing. Minimum thickness for tubular section shall be 4 mm. Minimum section thickness for Purlin shall be 2.5 mm. The tubular section shall be effectively send at the end to avoid any corrosion.

SOLID NODES: Only full solid spherical nodes as per design should be used throughout the work. The node shall be made of EN9 equivalent material or higher grade.

Agency to maximize the coal stockyard storage capacity by utilizing the available space. However, stockyard capacity in any case shall not be less than 1,50,000 MT in the stockpile considering 800 T/cum bulk density for coal.

Tentative cross section of the coal Stockpile shed is of Width 129 m with length of 280 m over the coal stockpile. Height for coal Stockpile shed may be considered as per the drawing attached.

Tentative load of Solar panel shall be 20Kg/sqm, with a panel size of 1mtr X 2mtr (approx.).

Note:

- Submission of Drawing for approval from BHEL/NTPC is in the scope of agency.
- Intermediate columns inside the shed are not allowed.
- Fabrication of structure at site is not allowed.
- Storage, Watch and ward of supplied structure and material at site, shall be in the scope of agency.

a) Wall Cladding & Roofing Material

Troughed permanently colour coated sheet of approved shade and colour shall be

i) either of steel with minimum 0.6mm bare metal thickness (i.e. excluding the thickness of galvanizing/aluminium-zinc coating and painting) of grade G250 as per AS1397 / grade SS255 as per ASTM A653M / grade S250GD as per EN 10326 with zinc coating to class Z275 / aluminium-zinc alloy coating to class AZ150.

ii) or of minimum 0.5mm BMT (i.e. excluding the thickness of galvanizing/aluminium zinc coating and painting) of grade G350 as per AS1397 / grade SS340 class 4 as per ASTM A792M / grade S350GD as per EN 10326 with zinc coating to class Z275 / aluminium-zinc alloy coating to class AZ150.

iii) or of steel of minimum 0.4mm BMT (i.e. excluding the thickness of galvanizing/aluminium-zinc coating and painting) of grade G550 as per AS1397 /grade

SS550 as per ASTM A792M / grade S550GD as per EN 10326 with zinc coating to class Z275 / aluminium-zinc alloy coating to class AZ150. Alternatively, aluminium feed material of minimum bare metal thickness of 0.7 mm of aluminium alloy of Series 31000 and above as per IS 737 and IS: 1254.

Bidder to ensure that same (per approved) profile is to be used throughout the package to maintain uniformity. Bidder to ensure that cladding sheet supplied at site to be provided with transparent organic film of thickness of 40 microns on each face. Also they should be stored in a covered place on wooden sleepers till erection.

Colour Coating:
Steel shall be colour coated with total coating thickness of at least 40 microns (nominal) comprising of silicon modified polyester (SMP with silicon content of 30% to 50%) paint or Super Polyester paint, of minimum 20 microns (nominal) dry film thickness (DFT) on external face over primer coat of minimum 5 microns (nominal) and minimum 10 microns (nominal) SMP or super polyester paint over primer coat of minimum 5 microns (nominal) on internal face. SMP and Super polyester paint systems shall be of industrial finish of product type 4 of AS/NZ2728.

Design Criteria:
For roof, permanently colour coated sheet of troughed profile shall be used. However alternative profile meeting the strength, deflection and other functional requirements such as section modulus and moment of inertia shall be provided.
Sheet shall be of profile, sectional properties, colour and shade as per specifications. The section modulus and moment of inertia of troughed profile shall be computed as per the provisions of IS 801 for satisfying the deflection and strength requirements.
For metal deck sheets used for roofing, the sectional modulus and moment of inertia of troughed profile per metre width shall be such that the deflection of sheets is limited to span/250 under design wind pressure for two span condition.
The sectional modulus and moment of inertia of troughed profile shall be computed as per the provisions of IS 801 for satisfying the deflection and strength requirements. No increase in allowable stress is permissible under wind load condition.

Fasteners:
Roofing sheets shall be fixed to the runner/purlins using self-drilling special coated fasteners confirming to corrosion resistant class 3 of AS3566 and tested for 1000 hours salt spray test. Spacing of Self-drilling fasteners in transverse direction (along runners/purlin) shall be equal to the pitch of trough or 250(+/-100) mm, whichever is lesser and in longitudinal direction at every runner/purlin location.
Alternatively, J/U type hooks shall be used in roofing which shall be provided in transverse direction (along runners/purlin) at a spacing equal to the pitch of trough or 250(+/-100) mm, whichever is lesser and in longitudinal direction at every runner/purlin location.

Miscellaneous Details:
To minimize the number of joints, the length of the sheet shall preferably be not less than

4.5m, cut pieces shall not be used, unless specifically approved by the Engineer. However, the actual length shall be such so as to suit the purlin / runner spacing. Lap between the sheets shall be at least 150mm in the longitudinal direction and at least one crest wide in the transverse direction which shall be properly anchored / fixed with fasteners.

Z spacers if required shall be made of at least 2 mm thick galvanised steel sheet of grade 350 as per IS 277 Sealant used for cladding shall be butyl based, two parts poly sulphide or equivalent approved, non stainless material and be flexible enough not to interface with fit of the sheets. Filler blocks as a trough filler shall be used to seal cavities formed between the profiled sheet and the support or flashing. The filler blocks shall be manufactured from black synthetic rubber or any other material approved by the Engineer.

All flashings, trim closures, caps etc. required for the metal cladding system shall be made out of plain sheets having same material and any weather/moisture sealants with appropriate material and coating specification as mentioned above for the outer face of the metal cladding. Overlap shall be min. 150 mm or as specified by manufacturer. The contractor shall prepare working drawings of sheeting system including end and side laps, flashing, fixing details etc. before starting sheeting work at site.

5.0 Quality Assurance:

Steel Structure

1. Check testing shall be carried out in the absence of Material Test Certificate.
2. Correlation shall be maintained by Manufacturer. All plates above 40mm thickness shall be 100% ultrasonically tested.
3. Visual inspection of all welds shall be performed in accordance with AWS D.1.1.
4. NDT requirements of structural steel welds shall be as under:
   a) 100% RT/UT on butt-welds of plate thickness >= 32 mm. Edge for field weld shall be examined by MPI for plate thickness >= 32mm.
   b) For Plates of 10 mm < thickness < 32 mm - 10% RT On butt welds.
   c) 10% Ultrasonic testing shall be carried out on full penetration welds (other than butt welds)
   d) DP Test on Welds:
   - 100% on Root Run & 10% on Final Welds of all butt welds
   - At random 5% on fillet of built-up plate girders.
5. Girders/columns/Beams etc. shall be trial assembled and match marked prior to dispatch.
6. Trial assembly procedure at shop shall be submitted for NTPC review and approval.

Submission of all relevant quality check documents, such as MQP, FQP etc. for approval from BHEL/ NTPC, shall be in the scope of agency.

6.0 Tools and Plants:

All T&Ps required for this package is to be arranged by agency. Numbers of T&Ps to be deployed at site shall be decided with respect to monthly plan and review formats (F-14) based on site requirement. BHEL shall not provide any T&Ps for this scope of work.

7.0 Schedule for Completion of work:

Eighteen (18) Months from the date of issuance of Letter of Intent.

8.0 Specific Exclusion:

- Civil foundation shall be made by BHEL, based on the agencies, inputs.
- Levelling and grading of coal stockpile area shall be done by BHEL.
- No RCC or PCC paving is required in coal stockpile area.
- No Mechanical/Electrical Ventilation system to be provided.
- Stacker Reclaimer package (including rail) is not in the scope of agency.

9.0 Terms of Payment:

Progressive Payment/ Final Payment: The payments for works under the scope of this contract shall be progressively upon submission of Running bill complete in all respects and confirmation towards statutory payments etc.

10.0 Taxes: As applicable as per Indian law.

11.0 Interested agency to Submit Qualification and pre-Qualification criteria:

Interested Agencies are requested to submit their Expression of Interest as per annexure A, along with technical and financial credentials and other relevant information in the form of documents listed below.

1. Detailed Company Profile and background.
2. Details Specification/ Technical features/data sheet of Space Frame Structure for stockpile area.
3. Broad activity wise work schedule, as per annexure.
4. Interested agency should submit audited/certified (by Charted Accountant) balance sheet of last 3 (Three) Financial Years. Financial details as per annexure.
5. Details of similar coal shed or Space Frame Structure or similar shed with module structure/ truss, Designed and/or Supplied and/or Constructed by them. Experience details as per annexure.
6. Copy of Work order/purchase order along with completion certificate for S.No. 4 above.
7. Details of Tools & Plants (T&Ps) as per Annexure D format.
8. Comment or suggestion (if any).

The details submitted by the Applicant(s) shall be complete in all respects and BHEL may seek clarifications / additional information as considered necessary. Based on the responses received and further discussions with respondents, BHEL shall take appropriate decision.

12.0 General Information

i. Responses to EOI are to be submitted in English only.

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ii. Notwithstanding anything contained in this EOI, BHEL reserves the right to accept or reject any Application and to annul the EOI Process in whole or part, at any time without any liability or any obligation for such acceptance, rejection or annulment without assigning any reasons thereof.

iii. BHEL reserves the right to verify all statements, information and documents submitted by the Applicant in response to the EOI. Any such verification or lack of such verification by BHEL shall not relieve the Applicant of his obligations or liabilities hereunder nor will it affect any rights of BHEL.

iv. The EOI process shall be governed by, and construed in accordance with, the laws of India and the Courts at Nagpur shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the EOI process.

v. All costs incurred for participation in the EOI shall be borne by the Applicant(s).

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13.0 Forms and Procedure

Format of Expression of Interest **Annexure A**

S.No.	Particulars	Details
1.	Name of Organization	
2.	Address	
	Mobile No.	
	Telephone No.	
	Fax No.	
	E-mail ID	
3.	Organization Details/ Detailed Company Profile and background.	To be filled as per Annexure-I
4.	Details of similar coal shed or Space Frame Structure or similar shed with module structure/ truss, Designed and/or Supplied and/or Constructed by them. Experience	To be filled as per Annexure-II
5.	Financial Status	To be filled as per Annexure-III
6.	List of equipment available with the agency	To be filled as per Annexure-IV
7.	Price analysis Breakup	To be filled as per Annexure-V
8.	Broad activity wise work schedule, as per annexure.	To be filled as per Annexure-VI
9.	Proposed Detailed Specification/ Technical features/ data sheet of Space Frame Structure for stockpile area.	In your own format

Signature of the applicant

Name & Designation

Place

Date:

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Annexure- I ORGANIZATIONAL DETAILS:

Sl.No.	Parameter	Details
1.	Organizational Set-up: - Year of Establishment - Status of Firm (Proprietorship/ Partnership/ Any other) - Name of Directors/Partners/Proprietors (Along with MOA/AOA/Partnership deed etc.)	
2.	Total Staff Strength	

Signature of the applicant

Name & Designation

Place

Date:

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Annexure-II

LIST OF EXPEREINCE IN LAST 7 YEARS

Sl. No	Name of Work / Project with address	Short Description of Work	Name and address of Owner / Client	Value of Work/ Project	Date of Start of Work/ Project		Date of Completion of Work/ Project		Agreement details with copy attached.
					Stipulated	Actual	Stipulated	Actual	

Note:

The list of Works/Project mentioned should be substantiated with documentary evidence such as work orders and completion certificates in the absence of which the application is liable to be rejected.

Signature of the applicant

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Annexure-III

FINANCIAL STATUS

S.No.	Financial year	Turnover (in Rs. Lacs)	Profit (in Rs. Lacs)
1.	2019-2020		
2.	2020-2021		
3.	2021-2022		

Note:

Certified copies of Chartered Accountants Certificates to be enclosed.

Place:

Date:

Signature of the applicant

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Annexure-IV

LIST OF EQUIPMENTS AVAILABLE WITH THE FIRM

S.No.	Name of Equipment	Type	Nos.
1.	Equipment		
i.			
ii.			
iii.			
2.	Software's		
i.			
ii.			
3.	Office Space (in Sqm)		

Signature of the applicant
Name & Designation

Place:

Date:

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Price Breakup (Excluding Taxes) Annexure V

S.No.	**Description**	**Percentage breakup**
1.	Design & Engineering	
2.	Material procurement	
3.	Fabrication & Manufacturing	
4.	Transportation/Freight	
5.	Pre-assembly & Erection	
6.	Painting, Inspection & Testing	
7.	Establishment, Administrative Expenses & other expenses.	
8.	Profit	
	TOTAL	**100%**

Signature of the applicant
Name & Designation

Place:

Date:

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Broad activity wise work schedule (Bar Chart) Annexure VI

S.No.	**Description**	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18
1.	Design & Engineering completion																		
2.	Material procurement completion																		
3.	Fabrication Cost & Manufacturing																		
4.	Pre-assembly & Erection																		
5.	Painting, Inspection & Testing																		

Signature of the applicant
Name & Designation

Place:

Date:

14.0 Contact Details: The respondent shall submit their response with all supporting documents duly signed to the following official by email/ speed-post/ courier:

Sh. Ankit Goyal (MANAGER-PMX) Bharat Heavy Electricals Limited Power Sector - Western Region 345-Kingsway, Nagpur-440001 Mobile: +91 78880-44133 Email: ankitgoyal@bhel.in, kumar_deepak@bhel.in

Last date for submission of EOI response: **23/11/2022**