

DIL/WLFGD-40

19.05.2022

**DHARIWAL INFRASTRUCTURE LIMITED  
2 X300 MW UNITS**

**NOTICE INVITING TENDER  
(Tender No. DIL-FGD-OE-01)**

**FOR**

**REVIEW ENGINEERING & CONSULTANCY SERVICES FOR RETROFITTING OF  
WET LIMESTONE BASED FLUE GAS DESULPHURISATION AND AUXILIARIES**

Ministry of Environment, Forest and Climate Change (MoEF&CC), Govt notified Environmental norms on 7<sup>th</sup> December 2015 for control of emissions in Coal Based Thermal Power plants. This will require retrofitting of Wet Limestone based Flue Gas Desulphurisation (WLFGD) system at **2 X 300 MW Dhariwal Infrastructure Limited (DIL)** Thermal Power Plant at Chandrapur, Maharashtra, India.

Sealed Tenders are invited from eligible Bidders for providing “**Review Engineering & Consultancy Services for Retrofitting of Wet Limestone based Flue Gas Desulphurisation and Auxiliaries**” at **Dhariwal Infrastructure Limited (2x300MW)** Thermal Power Plant as per the scope of services mentioned in Clause (C).

**A. MODE OF EXECUTION OF THE WLFGD PROJECT:**

The WLFGD Project shall be executed through the following different contracts/packages: -

- a) Supply of Main Plant System (MPS) for WLFGD.
- b) Supply of Balance of Plant Mechanical (BOPS-M) for WLFGD.
- c) Supply of Balance of Plant Electrical (BOPS-E) for WLFGD.
- d) Civil & Erection Contract (CEC) for entire WLFGD (*including wet stack design and erection*).

**B. QUALIFICATION REQUIREMENTS:**

Following documentary evidences are required to be submitted along with the offer to fulfil the Pre-Qualification Criteria (PQC) set by the Owner:

- Technical Criteria:

- a) The Bidder should have completed basic engineering and detail engineering (which include designing and detail engineering of civil, structural & architectural scope of works) of at least 3 coal fired power plant projects of minimum unit size 250 MW and above in last 10 years.
- b) The Bidder should have proven experience of preparation of Tender Specification for Wet Limestone based Flue Gas Desulfurization (WLFGD) for a thermal power plant of operating unit size not less than 250 MW along with providing technical support for issuance of NIT for International Competitive Bidding, Pre-Bid clarifications and subsequent techno-commercial Bid evaluation which has culminated in placement of order for installation of such FGD system.
- c) The Bidder should have been involved with post order detail engineering or engineering review of at least two projects for Wet Limestone based Flue Gas Desulfurization (WLFGD) for a thermal power plant of 250 MW and above sized operating units, which are under execution or are commissioned.

- d) The Bidder should have adequate engineering workforce in the relevant streams with requisite experience in India to carry out engineering consultancy services required for the above work. The list of workforces along with the experience is required to be submitted along with the offer.
- Financial Criteria:

The Bidder should have adequate financial capacity and resources to meet the financial obligations pursuant to scope of the services covered in Clause C. The Bidder should submit audited copies of his profit/loss account & balance sheet for the last (immediate) three years.

To be eligible for evaluation of the Tender and award of the contract the bidder shall satisfy the requirements of Pre-Qualification Criteria (PQC), set by owner.

### **C. SCOPE OF SERVICES:**

The scope of services shall include but not be limited to review and approval of basic & detail design, drawings, other relevant technical documents concerning major systems, equipment, materials and work pertaining to the entire scope of the packages as detailed in clause (A) above including integration of the different packages from Package Vendors and their integration with the existing system.

The objective of the design review will be to determine the compatibility of equipment and plant systems for performance of their specified functions.

Review shall be carried out to check the Package Vendors' designs for adequacy and compliance to the following :

- Contract requirements for all the packages as per clause (A)
- Requirements of Codes & Standards
- Statutory requirements
- Optimization
- Interface requirements
- Integration of equipment/systems for smooth execution and efficient operation of the plant
- Compliance to best practices, contemporary engineering aspects, quality, inspection and performance
- Safety, reliability, operability and maintainability aspects
- Performance Guarantee parameters

The scope shall cover the review and finalization of all layouts, design documents, schedules and work procedures etc. to be furnished by the Package Vendors for all the different packages as per clause (A), both under "Approval" and "Information" categories which include but are not limited to the following:

1. Review of overall WLFGD Layout including floor wise equipment location plan, basic design and studies pertaining to Limestone Handling System & Limestone Storage, Limestone Slurry Preparation System, Absorbers & Auxiliaries, Flue Gas Ducting including Booster Fans, Gypsum Dewatering System, Gypsum Handling System & Gypsum storage, WLFGD Effluent Treatment & Handling System, Wet Stack, Electrical and C&I system and other

auxiliary systems viz. Compressed Air System, Fire Fighting System, Dust Extraction System, HVAC etc.

2. Complete system integration of the different packages of WLF GD & its auxiliaries as per clause (A) incorporating all the Package Vendors' inputs and integration of WLF GD & its auxiliaries with the existing plant.
3. Review of design calculations, equipment data sheets, equipment GA drawings, performance curves/data, system drawings, schematics, flow diagrams, P&I diagrams, general arrangement / layout drawings, duct and pipe routing/layout and stress analysis of piping systems for complete mechanical system etc.
4. Review of electrical system design calculations, system drawings, control schematics, single line diagrams, metering & protection details, general arrangement drawings / electrical layout, panel layouts, cable layout / routing including cable schedule and interconnections for complete electrical system of various voltage levels, lighting schemes, earthing & lightning protections etc.
5. Review of C&I systems configuration including master instruments list (MIL), WLF GD Electrical Control Building & control room layout, panel configuration drawings, integration with plant DCS (covering all CLCS, OLCS and DAS functions), system details including architecture, layout, control loop configuration, logic diagrams, interfaces with existing plant, protections & interlock / inter trip particulars, details of various logs, trends, displays, inputs for various other DCS functions and protection of major equipment etc.
6. Review of all documentation related to civil GA/ design / RFC drawings for items of WLF GD buildings, civil work, checking & commenting on adequacy of civil assignment drawings/ inputs provided by Package Vendors, detailed construction schedule and the methodologies of civil work to be carried out by the Package Vendors.
7. Review of new Wet Stack design, drawings, design of acid resistant lining system, acid condensate collection system and Wet Stack operation.
8. Review of specification for aerodynamic model study, review of the report, conclusions on existing chimney sustainability and relevant document for modelling of the RCC stack.
9. Review of structural fabrication drawing and checking of the design of joints.
10. Review of QA requirements for design and manufacturing.
11. Attending meetings with Owner & Package Vendors like Technical Coordination and Review meetings, Project Review meetings etc.
12. Updating L3/ L4 schedule and triggering well in advance for Package Vendors' input required for detail design.
13. Finalization of shop and site performance test procedures for all equipment / systems.
14. Review & finalization of detailed field quality plan including 'Customer Hold Points' for stage / final inspection.
15. Inspection of equipment based on the above hold points if required.
16. Review of manufacturer's Test / Inspection Reports and Test Certificates for major equipment.
17. Review of Performance Guarantee (PG) parameters, correction curves, PG test procedures etc.
18. Review of all other relevant mechanical, civil, electrical and I&C documents/drawings issued by the Package Vendors, related to retrofit of FGD.
19. Detailed engineering services including but not limited to the following:

- I. Interface engineering as would be required among various packages and with existing system
  - II. Complete civil design and preparation of construction drawings in sync with existing plant for the following:
    - Roads in WLFGD area
    - Drainage system
    - Area grading in WLFGD area
    - Any non-plant Building not covered in WLFGD scope of work but required for smooth running of the plant
  - III. Preparation of enquiry specification with detailed BOQ for various items of work based on preliminary basic engineering work carried out by you for the work mentioned in item (II)
20. Deputing personnel at site as and when required for necessary clarifications etc.
  21. Generating Monthly progress report of engineering /drawings / document status and reports on 'as & when' basis for specific purpose.
  22. Providing technical assistance/support/information required by the Owner for obtaining clearances/ certificates or liaising with Statutory and other agencies.
  23. Assisting the Owner in regard to liaison with Lending Institutions and during Arbitration.
  24. Witnessing inspections, Performance guarantee tests & plant acceptance tests.

#### **D. RESOURCE / MANPOWER DEPLOYMENT**

The Bidder should have a team having in-house experts or experts hired by the Bidder having worked on the eligible assignments as per the qualifying requirements. A list of such identified key personnel (along with their short résumés) who will be involved in the job should be submitted by the Bidder.

The Bidder shall make available the services of the identified personnel as may be required for successful execution of the assignment and as may be required by the Owner on specified dates, venues and time in order to meet the obligations of the Owner. In case of replacement of key personnel, the same shall be done with prior permission with the Owner.

#### **E. TIME SCHEDULE:**

The time schedule for the services under this order shall be governed by the project schedules agreed between the different Package Vendors and the Owner. However, the overall completion schedule of the project shall be 24 months from Notice to Proceed (NTP).

Necessary resource and man power shall be engaged by the Bidder for successful execution of the assignment considering the overall Project schedule.

#### **F. EXCLUSION**

- Generation of basic data by laboratory testing / analysis, site survey, generation of other site related data, soil investigation, route survey, obtaining statutory approvals etc.
- Detailed engineering of equipment.
- Obtaining clearances required from government / statutory authorities. However, bidder shall provide Technical assistance for the same.

- Logistics and transportation route study for transporting material/ reagent/by product and equipment from source to project site.
- EIA Studies.
- Financial and Cash flow statement.
- Detailed Study for systems / facilities outside the project boundary
- Assessment of reagent supply and byproduct sale ability /disposal scenario.
- Liaison with Government Agencies and Data Collection from Government Authorities.
- All matters pertaining to legal & taxation aspects, participations in arbitration proceedings, Public Relations etc.

#### **G. TENDERING TIMELINE**

Issue of NIT	19.05.2022
Last Date and Time of Tender Submission	27.05.2022 (15:00 Hrs.)

#### **H. TENDER SUBMISSION**

Two Separate sealed covers superscribing “Techno- Commercial Offer” on the first cover and the “Price offer” on the second cover should be enclosed in the main cover duly sealed and indicating Tender Name, Due date for Opening and Bidders complete name and address.

Techno-Commercial offer should contain the details of relevant experience and credential of the Bidder.

Bidder shall submit their Tender in 03 (Three) Copies duly marked “Original”, “First Copy”, “Second Copy”.

Tenders shall be submitted to the office of:

**Mr. Pulak Nandy**  
**Dy. General Manager (Operation Services)**  
**Dhariwal Infrastructure Limited**  
**6th Floor, RPSG House**  
**2/4 Judges Court Road, Alipore**  
**Kolkata – 700 027**  
**West Bengal, India**  
**Telephone: +918335067266**  
**Email: [pulak.nandy@rp-sg.in](mailto:pulak.nandy@rp-sg.in)**

Tenders shall be received by the Owner before due date and time of closure of Tender submission. Any Tender received by the Owner after deadline for submission of Tenders will be returned unopened to the bidder.

OWNER shall not be responsible for misplacement or late receipt of Bid Documents (including those by Postal Delivery).

The Owner may, in exceptional circumstances and at its discretion, extend the deadline for submission of Clarification/Bids by issuing an Addendum, in which case all rights and obligations of the Owner and the Bidders subject to the original dead line will thereafter be subject to the deadline as extended.

## **I. COMMERCIAL AND FINANCIAL TERMS:**

For the performance of the Scope of Services, as detailed in Clause (C), the consultant should submit lump sum fees for the total scope work. This fees should include 50 Man-days of outstation visits from respective offices, as applicable and shall remain firm till completion of the project.

Quoted fees shall remain FIRM till the project completion schedule as mentioned under Clause (E).

Travelling expenses for outstation visits shall be reimbursed extra at actuals. International Travel arrangements, if required e.g. Visa shall be arranged by the Owner.

### **TAXES AND DUTIES:**

The quoted lump sum fee is exclusive of GST, which will be payable extra at prevailing rates. Income Tax deduction at source will be made as per statutes.

### **TERMS OF PAYMENT:**

Payment terms will be as follows:

- 5% of the total Contract Price shall be paid as interest free advance along with Work Order.
- 10% of the total contract price shall be released on issuance of NTP for MPS and CEC Contract.
- 75% of the contract price will be paid equal consecutive monthly instalment spread over the duration of the project. The first instalment will be due and payable thirty (30) days after issuance of NTP for MPS and CEC Contract.
- 10% shall be paid on commissioning of each unit on pro-rata basis.

### **METHOD OF PAYMENT:**

All payment shall be made against certification of Invoices within 30 days from validation of Invoice.

## **J. VALIDITY**

The Tender shall remain valid and open for acceptance for a period of 180 days from the Tender submission date.

## **K. DELIVERABLES:**

Review with necessary approval categorization of the engineering inputs including overall GA & civil assignment drawings, basic design, detailed design & release for construction (RFC) drawings etc. provided by the Package Vendors shall have to be completed by the Bidder in consultation with the Owner within a span of 07 (seven) days from the receipt of such documents.

**L. EVALUATION AND COMPARISON OF TENDER:**

The Tenders received, will be evaluated by OWNER from the PQC and financial points of view so as to make a selection in the best interest of OWNER for the complete work covered under this Tender Documents.

**M. AWARD OF CONTRACT:**

The Tenders received and accepted will be evaluated by OWNER. The acceptance of a Bid and award of Contract rests with OWNER. It shall not be obligatory on the part of OWNER to accept the lowest Bid. OWNER would be at liberty to accept any Bid, lowest or otherwise, and to reject any or all the Bids received, without assigning any reason, and no explanation can be demanded of him by any Bidder in respect thereto.

**N. LEGAL RESPONSIBILITY AND OTHER STATUTORY OBLIGATION:**

All legal responsibility / contractual and statutory obligations required shall be complied by tenderer and tenderer shall indemnify and keep owner indemnified against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto in respect of your scope of work.

Owner shall indemnify and keep the successful tenderer indemnified against all claims, demands, proceedings, damages, costs, charges and expenses brought or made by any third party not arising out of the successful tenderer's default or arising out of data & information supplied by the Tenderer.

**O. TERMINATION OF ORDER:**

Owner may terminate the Contract at any time upon written notice of not less than thirty (30) calendar days.

Upon receipt of such notice, the successful Tenderer shall promptly and orderly bring the Services to a close and shall deliver to Owner all reports, drafts and other documents prepared up to that date.

If the Termination is not due to default on part of the successful Tenderer, the Tenderer shall be entitled to the payment of its services duly performed up to the Termination of the Contract as well as to the reimbursement of all expenses including all the incidental expenses incurred for the performance of services till termination period.

**P. SUSPENSION OF ORDER:**

In case of the unforeseen events in the Projects, Owner may require parts of services to be suspended. Owner shall give a written notice of not less than 15 (Fifteen) calendar days to the successful tenderer for such suspension. Following the suspension of Services (as requested by Owner) the successful tenderer shall receive such portion of the Contract value along with reimbursement of all expenses which corresponds to the portion of services performed by the successful tenderer up to the date of suspension. Upon resumption of Services, the parties shall

mutually determine the remaining Services and the corresponding reimbursement & time for completion.

**Q. CONFIDENTIALITY:**

Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations concerning the award of Contract shall not be disclosed to tenderers or other persons not officially concerned with such process.

The contents of the order and data/ reports to be prepared by the successful tenderer are confidential. The successful tenderer shall not divulge, publish or cause to publish any means whatsoever any details concerning the above in any respect without owner's written consent.

**R. GENERAL:**

- a. OWNER shall not be responsible for misplacement or late receipt of Bid Documents (including those by Postal Delivery).
- b. Tender Documents are not transferable.
- c. Owner reserves the right to assess the capability / qualifications of the Bidder and/or its associate to satisfactorily perform the contract. During such assessment the Bidder may interalia be required to demonstrate past experience of timely completion of works of similar nature mentioned above.
- d. Owner reserves the right to reject the proposal of any or all Bidders without assigning any reasons whatsoever (including but not limited to any non-compliance of the Bidder with the applicable instructions/orders issued by the Ministry of Power and/or other Ministries/Departments of the Government of India, as may be applicable to such Bidder).
- e. Owner reserves the right not to accept the lowest offer without assigning any reason whatsoever.
- f. Owner reserves the right to negotiate with any or all of the Bidders on any terms and conditions.
- g. Owner reserves the right to cancel or withdraw the bidding process at any time during the process without assigning any reason whatsoever and shall bear no liability whatsoever consequent upon such a decision.
- h. The bid prepared by the Bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the OWNER shall be written in the English language.
- i. At any time prior to the deadline for submission of Bids, the Owner may amend the Bid documents by issuing Addenda. Addenda may cover the queries raised and the responses given.

All correspondence / inquiry with respect to above shall be addressed to:

**Mr. Pulak Nandy**  
**Dy. General Manager (Operation Services)**  
**Dhariwal Infrastructure Limited**  
**6th Floor, RPSG House**  
**2/4 Judges Court Road, Alipore**  
**Kolkata – 700 027**  
**West Bengal, India**  
**Telephone: +918335067266**  
**Email: [pulak.nandy@rp-sg.in](mailto:pulak.nandy@rp-sg.in)**