

Numaligarh Refinery Limited

(A Government of India Enterprise)



invites

Expression of Interest (Eoi)

(Eoi No.: NRL/BD/Eoi-01/2023-24)

from

**Indian Company / their Consortium / Affiliates /
Representatives**

for

**"Setting up 1 TPD Coal Gasification, Gas Cleaning, Gas
Conditioning and Methanation (composite pilot facility) for
production of Synthetic Natural Gas (SNG) at Numaligarh
Refinery in Assam, India"**

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Section I: Eoi Information

DETAILED NOTICE INVITING EXPRESSION OF INTEREST (Eoi)

Eoi No.: NRL/BD/Eoi-01/2023-24

Date: 28.06.2023

NRL is Inviting Expression of Interest from Indian Company / their Consortium / Affiliates / Representatives for Setting up 1 TPD (1000 kg/hr of coal) Coal Gasification, Gas Cleaning, Gas Conditioning and Methanation (composite pilot facility) for production of Synthetic Natural Gas (SNG) at Numaligarh Refinery in Numaligarh, Assam, India

1. NRL (A Government of India Enterprise) intends to set-up a Coal Gasification, Gas Cleaning, and Gas Conditioning (composite pilot facility) at Numaligarh Refinery in Numaligarh, Assam, India. In this regard, NRL invited Expression of Interest (Eoi) from Indian Company / their Consortium / Affiliates / Representatives, herein after called **APPLICANT**.

NOTE: The creation of pilot plant for Coal Gasification facility for Synthetic Natural Gas (min 95 mol% purity of methane) Generation within the refinery premises is an initiative by NRL. The Eoi is to assess the future commercialization prospects of the initiative. After identifying the APPLICANTs through Eoi who are interested in setting up pilot plant for Coal Gasification facility for SNG Generation, Request for Proposals (RfP) for undertaking project(s) in the refinery shall be invited for setting up the facilities.

2. **DOWNLOAD AND TIMELINES FOR SUBMISSION OF Eoi:**

(i)	Availability of EOI document	EOI documents are available on following websites: a) NRL's website i.e. www.nrl.co.in >Quick Links > Tenders b) CPP Portal i.e. https://eprocure.gov.in/eprocure/app . Interested APPLICANTs may download the documents of Eoi free of cost from above websites. <i>**Corrigendum / Addendum, if any, shall be published through NRL's website (www.nrl.co.in) and CPP portal only. Intending bidders are requested to visit the above website regularly till last day of submission of EOI.</i>
(ii)	Last date of submission of EOI:	12.07.2023 (11.00 AM)
(iii)	Last Date for Queries/ Seeking Clarification	10.07.2023 (4.30 PM)
(iv)	Date of opening of EOI :	13.07.2023 (11.00 AM)
(v)	Mode of submission of EOI Documents:	EOI should be submitted online in Central Public Procurement portal only. i.e. http://eprocure.gov.in/eprocure/app . <u>Note:</u> • EOI received through hand or through Post/Courier shall not be considered and will be rejected. • Queries (if any) may be referred in writing to at E-mail: rupam.k.sarmah@nrl.co.in/pranta.p.singha@nrl.co.in/prasanta.barman@nrl.co.in

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3. NRL reserves the right to reject or accept any or all applications, cancel / withdraw the Eoi Process without assigning any reason whatsoever, and in such case, **APPLICANT** shall not have any claim arising out of such action, NRL bears no responsibility or liability of any kind in reference to the Eoi

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Section II: Introduction

1. INTRODUCTION

- a. Numaligarh Refinery Limited (<https://www.nrl.co.in/>) operates a 3 MMTPA petroleum refinery at Numaligarh in Golaghat district of Assam. NRL has embarked on a major integrated Refinery Expansion Project to treble its capacity from 3 MMTPA to 9 MMTPA. NRL is also setting up a Crude Oil Import Terminal at Paradeep Port in Odisha and laying about 1640 KM of pipelines for transporting imported Crude Oil to Numaligarh.
- b. NRL achieved a net-profit of INR 37 Billion (approx. 0.45 Billion USD) in the financial year 2022-23 and has been consistently paying dividends to its promoter.
- a. NRL in keeping the focus on leveraging decarbonization efforts of the Indian Energy Sector and India's commitment to COP 26 for reducing GHG emissions by utilizing the available feedstocks, wants to set up **1TPD Pilot scale Coal Gasification facilities**.
- b. The objective of pilot plant facility is the production of **Clean Synthetic Natural Gas (minimum 95 mol% of methane) by coal gasification**.
- c. The offered technology for 1 TPD coal gasification pilot plant shall be based on **Fluidized bed or Entrained bed gasifier**.
- d. India has a reserve of 307 Billion tonnes of thermal coal and about 80% of coal produced is used in thermal power plants. With environmental concerns and the development of renewable energy, diversification of coal for its sustainable use is inevitable. Coal gasification is considered a cleaner option compared to burning coal. Gasification facilitates the utilization of the chemical properties of coal. SNG produced from Coal gasification can be usable as substituted of piped NG/LNG. These products will help move towards self-sufficiency under Atmanirbhar Bharat Abhiyaan. In line with the above objective, the Ministry of Coal has taken the initiative for utilizing coal through coal gasification, and as such this Mission document has been prepared to achieve 100 Million Tons of coal gasification by the year 2030.
- e. Following facilities are available at NRL Plant:
 - i. Availability of suitable plot
 - ii. Availability of adequate power & utilities
 - iii. Provision of basic material/chemical testing facilities
 - iv. Captive SNG consumption potential

2. INTENT OF THE EXPRESSION OF INTEREST (EOI)

- a. NRL Limited intends to set-up 1TPD pilot plant for Coal Gasification, Gas Cleaning, Gas Conditioning and Methanation (composite pilot facility) at Numaligarh Refinery in Numaligarh, Assam, India.
- b. This initiative will help NRL for future scale-up and reduce its CO₂ footprint and reduce oil import dependence of the country by using SNG as an substitute to natural gas.
- c. The offered Coal Gasification technologies shall be capable of best utilization of both Low and High Ash Indian Coals. These technologies will be evaluated with regard to technology, financial viability, and the best possible option for commercialization.
- d. Based on the responses in the EOI, the project (pilot plant) shall be implemented at NRL based on their feasibility.

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- e. The key roles and responsibilities of the stakeholders under the projects shall include but not be limited to the following:

i) NRL's Role:

- Facilitate in setting up of composite pilot plant facility at the identified location.
- Providing land, feedstock, power & utilities to the facilities within/around the plant premises
- Arranging all required statutory clearances regarding setting up of the facility

ii) Applicant's Role:

- Build the composite pilot plant facility on LSTK (Lump Sum Turnkey) basis, including commissioning and successful performance test run of the facility for production of SNG (min 95 mol% purity of methane)

The Applicants may express their interest in respect of their offerings along with other inputs as indicated in relevant Annexures/formats.

The response(s) received in the Eoi will be utilized by NRL for:

- Identification of suitable technology, financial viability, and best possible option for implementation.

AND/OR

- Formulation of specifications for various systems/stages required for the execution of pilot plant.

AND/OR

- Shortlisting of parties for forthcoming Request for Proposals (RfP) / short-term tenders by NRL for undertaking the proposed pilot plant.

Section III: Instructions to the Applicants

1. The Applicants should note that:

- a. Language of the responses to EOI or any query/ clarifications/ correspondences shall be in English only
- b. For Expression of Interest (EOI), the Application Forms and Annexures given in **Section-V** shall be duly filled, signed & sealed and to be submitted in CPP portal.
- c. Applicants should go through **Section-I** and **Section-II** thoroughly before filling and submitting the application form and annexures in **Section-V**
- d. Applicants shall mention the name and contact details of two persons, with complete address, phone number, and email id
- e. NRL, at its sole discretion, may ask for additional information/ documents and/ or seek clarifications from the Applicant(s) after the Deadline for submission of a response, inter alia, for the purpose of removal of inconsistencies or infirmities in their responses

2. Enquiries and clarifications

Any clarifications on the EOI may be sought to the following via e-mail:

E-mail ID for any clarification: [rupam.k.sarmah@nrl.co.in/](mailto:rupam.k.sarmah@nrl.co.in) [pranta.p.singha@nrl.co.in/](mailto:pranta.p.singha@nrl.co.in)
prasanta.barman@nrl.co.in

3. Corrigendum

At any time before the last date of submission of Eois, NRL may, for any reason, whether at its own initiative or in response to a clarification requested by an Applicant, modify the EOI document. The amendment will be posted on the websites (i.e. NRL website and CPP Portal) and will be binding on the Applicants and the Applicant will give due consideration to the same, while they submit their Eois, and would invariably enclose documents/ information, as required, on account of the amendment, as a part of the EOI. NRL may, at its discretion, extend the deadline for the submission of Eois.

4. Preparation of the Response to EOI: The application of EOI should consist of Annexure- I, III & IV of Section-V of this EOI invitation.

5. Submission of the Response to EOI:

EOI should be submitted online in Central Public Procurement Portal only (i.e. <http://eprocure.gov.in/eprocure/app>) within the last date of submission of EOI. (Note: EOI received through hand or through Post/Courier shall not be considered and will be rejected)

6. Opening of Responses to the EOI:

The responses to the EOI shall be opened as per the EOI opening time schedule.

7. Costs and Expenses towards Response to Eoi

The APPLICANTS shall be responsible for all the costs associated with the preparation of the response and participation in discussions and finalization & execution of the documents related to this Eoi, NRL shall not be responsible in any way for such costs, regardless of the conduct or outcome of this short-listing/ selection process.

8. Confidentiality

The APPLICANTS undertake to hold in confidence this Eoi and any document related or pursuant to this Eoi and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

- a) To their professional advisors;
- b) To their officers, contractors, employees, agents or representatives, and financiers, who need to have access to such information for the proper performance of their activities;
- c) Disclosures required under applicable Law, without the prior written consent of the other parties of the concerned agreements.

Provided that the APPLICANT(s) agrees and acknowledges that NRL may at any time, disclose the terms and conditions of this Eoi and any document related or pursuant to this Eoi to any person, to the extent stipulated under the applicable Law.

9. Disclaimer:

- a) This Expression of Interest (Eoi) has been prepared by NRL Ltd. for a response from any Indian Company/their Consortium/Affiliates/Representatives for setting up Coal Gasification, Gas Cleaning, and Gas Conditioning (composite facility) at NRL, Numaligarh Plant in India.
- b) Creation of a manufacturing facility within NRL plant premises shall be subject to requisite approvals from State and Central Government. NRL shall process these approvals, after receiving the desired response for Eoi.
- c) In submitting an expressed Eoi in response to the Eoi, the APPLICANTS certify that it understands, accepts, and agrees to the disclaimers on this page. Nothing contained in any other provision of the Eoi nor any statements made orally or in writing by any person or party shall have the effect of negating or superseding any of the disclaimers set forth herewith.

Section IV: Consideration of Response

RESPONSIVENESS/EVALUATION METHODOLOGY

Responsiveness Check

The responses submitted by Applicants shall be scrutinized to establish interest in setting up Coal Gasification, Gas Cleaning, and Gas Conditioning (composite facility) at NRL, Numaligarh Plant in India. Responses shall be deemed non-responsive for the following reasons:

- a. Responses that are incomplete, i.e. not accompanied by any of the applicable formats inter alia covering letter, power of attorney/ valid authorization, applicable undertakings, provided in more detail in the annexures in Section-V;
- b. Responses not signed by authorized signatory and/or stamped in the manner indicated in this Eoi;
- c. Material inconsistencies in the information/ documents submitted by the APPLICANT
- d. An APPLICANT submitting more than one response to this Eoi either itself or through an affiliate or subsidiary company;
- e. Response being conditional in nature;
- f. Response not received by the response Deadline;
- g. Response having Conflict of Interest;
- h. APPLICANT delaying in the submission of additional information or clarifications sought by NRL, as applicable;

All bids that shall meet the responsive check requirements set out above in this section of the Eoi document shall be considered as “Responsive”. In case of non-submission of relevant details as above, the responses may be considered as “Non-Responsive”, at the sole discretion of NRL and will not be considered further.

Section V: Application Form & Annexures

Annexure-I

TYPICAL COAL COMPOSITION FOR A 1 TPD COAL GASIFICATION PLANT

Proximate Analysis		Ultimate Analysis	
Component	Chemical analysis wt%	Component	Chemical analysis wt%
Moisture	2.2-7	Carbon	63-78
Ash	1-18.6	Hydrogen	4.5-5.5
Volatile Matter	37-43	Nitrogen	1.3-1.8
Fixed Carbon	41.6-54	Sulphur	2.3-5.7
		Oxygen	10.5-25
Calorific value	6400-7600 kcal/kg		

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Annexure-II

FORMAT FOR COVERING LETTER CUM UNDERTAKING

(The covering letter should be on the Letter Head of the APPLICANT)

Date: _____

Place: _____

To,

Sub. : INVITATION FOR EXPRESSION OF INTEREST

Ref.: Eol No. _____, dated _____ (the "Eol")

Dear Sir/Ma'am,

We, the undersigned _____ [insert name of the "APPLICANT"] having read, examined and understood in detail the **(INVITATION FOR EXPRESSION OF INTEREST)**.

We confirm that neither we nor any of our Parent Company/ Affiliate/ Ultimate Parent Company has submitted response other than this response directly or indirectly in response to the aforesaid Eol.

1. We give our unconditional acceptance to the Eol, issued by NRL, as amended. In token of our acceptance to the Eol, the same have been signed & stamped by us and enclosed to the response. We hereby confirm that the provisions of the Eol shall be binding on us.
2. We have submitted our response strictly as per provisions and formats of the Eol, without any deviations, conditions and without mentioning any assumptions or notes.
3. We hereby unconditionally and irrevocably agree and accept that the decision made by NRL in respect of any matter regarding or arising out of the Eol shall be binding on us. We hereby expressly waive any and all claims in respect of Eol process. We confirm that there are no litigations or disputes against us, which materially affect our ability to participate or function under the obligations with regard to Eol.
4. Details of the contact person are furnished as below:
Name :
Designation :
Address :
Contact numbers :
Email Id :

**INVITATION FOR
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5. We are enclosing herewith the entire response containing duly signed formats in electronic format as per the Eoi for consideration.
6. It is confirmed that our response is consistent with all the requirements of submission as stated in the Eoi and subsequent communications from NRL, if any.
7. The information submitted in our response is complete, strictly as per the requirements stipulated in the Eoi, and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response.
8. We confirm that we have not taken any deviation so as to be deemed “Non-Responsive” as stipulated in Section-IV of this Eoi.
9. We understand that you are not bound to accept any response you receive.

We remain,

Yours sincerely

(Name, Designation and Signature of Authorized Person in whose name Power of Attorney/ authorization is issued)

Annexure-III

INFORMATION TO BE SUBMITTED BY THE APPLICANT

(Note: Documents in support of meeting the respective requirement shall be submitted by the Applicant.)

1. Name of the Company/Lead Partner of Consortium:
2. Legal status of the Company/Consortium:
3. Brief description of the Company/Consortium including details of its business groups/subsidiaries/affiliates:
4. Existing Manufacturing facilities — Locations, Capacity
5. Details of similar Coal to Syn Gas/SNG plants installed.
 - a. Number of plants set up and under operation with their capacity.
 - b. Technology maturity, capacity utilisation, yield etc.
6. Date of Incorporation:
7. Date of Commencement of Business:
8. Full address including Telephone nos. / Fax nos.:
 - a. Registered Office:
 - b. Head Office:
 - c. Address for communication:
 - d. Contact Details:
 - e. Office Address in India, if any:
9. Documents to be enclosed:

Technical Credentials — Relevant Product/System catalogues, Experience /Reference List, Copies of Customer Certificates, Engineering strengths, collaborations/tie-ups with manufacturer (if applicable), quality accreditations, etc.

Financial Credentials — Copies of Audited Financial statements (Annual Reports) for last 3 years, Credit Rating, Market share (Domestic/International), Segmental Revenue in the applied category (ies).
10. Any other documents considered relevant.

(Sign & Company Seal)

Authorized signatory

Annexure-IV

INFORMATION TO BE SUBMITTED BY THE APPLICANT

1. Type of manufacturing facility (ies) proposed to be set-up and technology
2. Details of technology for Coal Gasification for both low & high Ash Indian Coal
3. Details of technology for Gas Cleaning and Gas Conditioning
4. Details of Methanation technology for SNG production from clean syn-gas
5. Capacity of manufacturing facility (ies) proposed to be set-up
6. Energy intensity, efficiency, Inputs required for each stage
7. Land area requirement for proposed manufacturing facility (ies)
8. Estimated power requirement
9. Estimated water requirement
10. Steam requirement, if any, may inform HP/MP/LP
11. Oxygen requirement.
12. Any other utilities required.
13. Manpower requirement
14. IT infrastructure requirements
15. Types of effluents (air/water borne) and treatment before exhaust/discharge: Level(s) of residual pollutants vis-a-vis maximum allowable limits in India/Country of Origin
16. Estimated investment for proposed manufacturing facility (ies)
17. Cost wise Percentage (%) of imported components and input raw material/machinery proposed to be imported and likely source countries.
18. Estimated cost of finished products
19. Other value-added products along with their estimated cost
20. Timelines for starting the execution on proposed manufacturing facility (ies)
21. Time for completion of manufacturing facility (ies)
22. Estimated annual Operating Expenditure