



Energy for India
CAIRN INDIA LIMITED

**Global Expression of Interest (Eoi) for Central Polymer Facility and Injection
Equipment project for Rajasthan Block**

Cairn India Ltd. ("CIL") is the Operator of the Rajasthan onshore block on behalf of its Joint Venture partners, Cairn Energy Hydrocarbons Limited and Oil and Natural Gas Corporation (ONGC), of the Contract Area RJ-ON-90/1 at Barmer in the state of Rajasthan. The RJ-ON-90/1 Block contains a number of major oil fields namely Mangala, Bhagyam, Aishwariya and various other discoveries which would be developed over a period of time. This Global 'Expression of Interest' is sought for Central Polymer Facility and Injection Equipment project for developments in Rajasthan Block where Cairn India Ltd (CIL) is the Operator.

CIL, on behalf of its joint venture partners, invites reputed bidders (Indian and International) with demonstrated HSE performance to express their interest for pre-qualification to participate in an International Competitive Bidding Process (ICB) for execution of Central Polymer Facility (CPF) and Injection Equipment (Pumps, Static Mixers).

For the purpose of this tender, following are the technical requirements of the project:

- Produce polymer solution at Mother Solution preparation unit (MSP) with operating parameters of up to 15,000 ppm concentration, viscosity of 2000 centipoise (cP), maximum shear rate of 7.34^{-1} at a temperature of 60°C
- Handle 150 - 200 metric tons per day of polymer (Poly Acryl Amide - PAM) powder.

Scope of Work shall comprise of Central Polymer Facility and Injection Equipment, including polymer unloading and storage arrangement, polymer mother solution preparation facility (including associated utilities, control systems and electrical systems), polymer mother solution pumping arrangement, and Polymer mixing and injection at well pads.

Injection will be across a number of injection wells, with distances of approx. 7 km from CPF.

In view of the nature of the scope, bidders (both Indian & International) possessing strong capabilities and proven record of performance in executing similar jobs and complexity should respond to this EOI.

- Letter of interest with detailed company information
- Detailed information of the Company including
 - a. Company's financial performance documents (Audited Balance sheets and Profit and Loss statements) for last five years. Please separately provide financial performance for polymer flooding and/or EOR business (in case of polymer powder business too, please mention equipment financials separately)
 - b. Company ownership details – Private / Public, Shareholding details
 - c. Organization structure
 - d. Manpower resources at management and operating level
 - e. Equipment manufacturing location and capacity (definition of units of capacity to be clearly specified)
 - f. Office and branch locations
- Details of polymer flooding projects where you were the equipment provider. Please specify the projects undertaken for Enhanced Oil Recovery, as well as polymer flooding in other industries with similar operations like Mining, Water Treatment etc. For the projects please provide information including:
 - a. Details of installations with Mother Solution Plant (MSP) concentration, Mother Solution Polymer viscosity and polymer tonnage (per day) handled
 - b. Please specify the equipment that your company provided
 - c. Please include other operating parameters - MSP temperature, MSP pressure,

- maximum distance to which concentrate is transferred , loss of viscosity due to shear, injection temperature, injection pressure, injection viscosity
- d. Nature of execution – Project or Pilot
 - e. Location of project, operator, year of commissioning, delivery lead times for equipment
 - f. Project / Job value and Completion Certificates
 - g. Delivery performance records
 - h. Client references along with the point of contact
- Provide examples of projects (if any) where you were involved as an EPC player, either alone or as part of a consortium
 - a. Describe the nature of EPC services provided by your consortium / company
 - b. Please explain your design capabilities in setting up Polymer Facilities. Please include examples of projects where you have demonstrated design capabilities
 - c. Please specify if your company provided end-to-end performance assurance in these projects (i.e. assurance of viscosity at injection) – Give examples if applicable
 - Provide examples of polymer flooding projects (if any) where you provided outsourced operation services i.e. you operated the polymer processing facility on behalf of the customer
 - a. Clearly highlight the activities/services that were managed by your organization as part of the outsourced operations scope. E.g. Polymer sourcing, polymer supply chain, inventory, manpower, maintenance of equipment etc.
 - Provide details of product offerings (e.g. container unloading equipment, silos, dosing & dispersion unit, maturation tanks, pumps – booster and injection, static mixers etc.) and product capabilities
 - a. Please specify which are the specific equipment / components typically included within a package solution for polymer flooding? Also mention which of these components / equipment can be provided separately?
 - b. Clearly specify the delivery lead times of all the products/equipment. Include delivery lead times for complete CPF package
 - c. Clearly include maximum polymer handling capability in kg / hour of equipment
 - d. List partner / preferred sub-contractor OEMs with whom you collaborate with to provide various elements of the CPF package solution. Please provide delivery lead times for each sub-contracted element
 - e. Please list all major polymer suppliers with whom your equipment is compatible. Also please specify if there is any constraint on using PAM of requisite from any supplier
 - f. In case of polymer supply, please include references and case studies for projects (EOR / similar operation industries like Mining, Water Treatment)
 - Quality assurance/control practices and certifications
 - Health, Safety and Environment (HSE) policies, certifications, procedures and statistics on HSE performance covering the last four (4) years
 - Any other presentations / documents you might want to share to describe your capabilities / experience in polymer flooding (EOR / similar operations' industries)

CIL requests interested bidders (both Indian and International) possessing substantial and proven record of performance in executing similar projects and magnitude, to submit their Expression of Interest (Eoi) along with pre-qualification documents.

The envelope containing the pre-qualification documents should be subscribed with the title **“Pre-qualification for Central Polymer Facility and Injection Equipment for Rajasthan block”** and submitted to the below address within Fourteen (14) days of the publication of this Eoi

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