



CAIRN INDIA LIMITED

GLOBAL EXPRESSION OF INTEREST (Eoi) UNDER INTERNATIONAL COMPETITIVE BIDDING (ICB) FOR PROCUREMENT OF MECHANICAL/ ELECTRICAL AND INSTRUMENTATION (E&I) EQUIPMENT/ PACKAGES FOR RAJASTHAN (RJ-ON-90/1) BLOCK

Cairn India Ltd (“CIL”) is the Operator of the Onshore RJ-ON-90/1 block, on behalf of itself and its Joint Venture (JV) partners Cairn Energy Hydrocarbons Limited (CEHL) and Oil and Natural Gas Corporation Limited (ONGC), located in Barmer district, in the state of Rajasthan, India. The Block contains number of major oil discoveries, including the Mangala, Bhagyam and Aishwariya Fields and various other discoveries which would be developed over a period of time. The ‘Expression of Interest’ is sought for developments in Rajasthan Block, where Cairn India Ltd (“CIL”) is the Operator.

CIL on behalf of itself and its joint venture partners invites interested contractors (Indian and International) with proven capabilities and demonstrated Health, Safety and Environment (HSE) performance to express their interest for pre-qualification to participate in an International Competitive Bidding (ICB) process for the packages listed below. **Stand-alone** Stockist / Trader / Distributor need NOT apply**. CIL shall enter into Long Term contract for the supply of the Packages on lumpsum / call-out order basis.

The scope includes design, engineering, shop fabrication/ manufacturing, testing and delivery (wherever applicable).

Sub Package Ref No.	Item Description	Brief Technical specification
A1	Design, Fabrication, Testing, Packing and Supply of Skid Mounted Pig Launcher/ Receiver	<ul style="list-style-type: none">The unit will be skid mounted and include a Quick Opening Closure (ASME U Stamped), piping to various tie points, valves, instrumentation, pig signallers, etc.All lines and Pig Barrels to be Heat traced & insulated.Line Size/Specification: 6” to 30“; Rating -300#, 600#, 900#, ASME B 31.4The Supplier shall be responsible for detailed design, supply of materials, fabrication, assembly and testing, in accordance with ASME B31.4 /ASME Section VIII, Div 1 as well as technical documentation, painting, and shipment.
A2	Design, Manufacture, Fabrication, Inspection, Testing and Supply of Instrument Air Compressor Package	Design, Material Procurement, Manufacture, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning Supervision/ support for IA (Compressor + Dryer) Packages along with package PLC and Modbus connectivity. A) Capacity: 60 - 2000 NM ³ /Hr. and Pressure rating 1034 Kpa g Electric Motor driven Lubricated Rotary Screw Compressor I with after cooler, liquid separator, Dryer, Pre & post filter and Receiver . B) Capacity: 2000 - 5000 NM ³ /Hr. and Pressure rating 1034 Kpag Electric Motor driven Integrally geared centrifugal compressor as per API 672 with inter /after coolers, liquid separator, Dryer, Pre & post filter and Receiver.

Sub Package Ref No.	Item Description	Brief Technical specification
A3	Design, Manufacture, Fabrication, Inspection, Testing and Supply of Chemical Injection Skid/ Package	Design, Material Procurement, Manufacture, Fabrication, integration Inspection, Testing, Pre-commissioning & Commissioning Supervision/ support for Chemical Injection Skid/ Packages including storage tanks, Electric Motor driven, Positive displacement double diaphragm controlled volume pumps as per API 675 and associated Piping, Valves, Instrumentation certified EEx" for IEC Zone-2. Chemical: DMF/ Corrosion inhibitor/ Hydrate inhibitor/Methanol/ oxygen scavenger etc. Capacity Range: up to 9.0 L/min. Pressure Range: up to 30000 Kpag MOC : SS 304 /SS 316
A4	Design, Engineering, Manufacture, Fabrication, Inspection, Testing and Supply of Emergency Power system/ DG sets in various capacities	Design/ Engineering, Material Procurement, Manufacture, Fabrication, Assembly/ Integration, Inspection, Testing, Pre-commissioning & Commissioning Supervision/ support for Emergency Power supply system/DG sets including engine, alternator, exhaust stack, acoustic enclosure and control panel. Suitable for IEC Zone-2. Fire & Gas detection and suppression system shall also be included. Capacity Range: A) 200 KVA to 1000 KVA B) > 1000 KVA
A5	Design, Supply, Testing of Mobile and Online Multi Phase Flow Meter Skids	Design, Material Procurement, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning support for Mobile and Online Multi-Phase Flow Meter Package comprising of Structural base frame housing Piping, EHT, Instrumentation. Meter sizes 1" - 20", 150#/300/600#/900#/2500# with MOC as SS 316/ SS duplex complete with Data acquisition system with necessary hardware/ software, obtaining AERB approval as required.
A6	Design, Fabrication, Testing, Packing and Supply of Skid mounted Production/ Test/ Injection Manifolds for Well pads	Fabrication and Supply of Well Manifold piping skid which include Structural, Piping and E&I Fabrication and Installation as per codes and standards. Assembly, Painting Insulation, EHT and Hydro testing, Air Blowing with approved procedures, Torque tightening. Skids shall be fully equipped with associated Electrical, Instrumentation, Piping, Structural base and other items as specified.
A7	Fabrication, Testing, Packing and Supply of Cellar Piping Skid	Fabrication and Supply of Modular Piping skid which include Structural, Piping and E&I Fabrication and Installation as per codes and standards. Assembly, Painting Insulation, EHT and Hydro testing, Air Blowing with approved procedures, Torque tightening, Commissioning and Pre-commissioning support, Leak test up to 7Bar (Using Compressed Air) with approved procedures, Nitrogen purging at 0.5Bar, Nitrogen blanketing up to 0.5 to 1bar with Temp with target O2 levels not exceeding 0.5% v/v, control loops checks w.r.t cause & effects, blinding for, and necessary documentation preparation and submission. Skids shall be fully equipped with associated Electrical, Instrumentation, Piping, Structural base and other items as specified.
A8	Design, Fabrication, Inspection, Testing and Supply of Shell & Tube heater	Design, Material Procurement, Fabrication, Inspection, Testing, Supply, Pre-commissioning and Commissioning support of Shell & Tube heat exchanger, for heating process liquid using MP steam on shell side with IBR approvals as applicable. Design Pressure (Shell / Tube) kPag: 1800 / 1800 Design Temperature (Shell / Tube) Deg C: 225 / 225 MOC (Shell / Tube): Carbon Steel / Alloy 20 ASME U-Stamp: Required

Sub Package Ref No.	Item Description	Brief Technical specification
A9	Design, Fabrication, Inspection, Testing and Supply of Shell and Tube Helical Baffle type heat exchanger	Design, Material Procurement, Fabrication, Inspection, Testing, Supply, Pre-commissioning and Commissioning support of Helical Baffle Shell and Tube heat exchangers with steam on tube side including obtaining of necessary patented/ proprietary design/ drawing, licences, statutory (IBR) approval etc. as applicable. MOC (Shell/ Tube) : C.S + Duplex SS Lining / Alloy 20
A10	Design, Fabrication, Inspection, Testing, Packing and Supply of Air cooler	Design, Material Procurement, Fabrication, Inspection, Testing, Supply, Pre-commissioning and Commissioning of Air Cooled Heat Exchanger skid for cooling of HC Vapours having approx. 500-2000 KW heat duty. Design pressure 1050 Kpag and 175 Deg. C Design temperatures.
A11	Design, Fabrication, Inspection Testing, Packing and Supply of Centrifugal pumps	Design, Material Procurement, Manufacture, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning support for Centrifugal Pump Packages in various capacities, differential head and material of construction as per API 610 for Oil and Gas industry process service comprising of Structural base frame housing pump, Motor driver, Coupling, Mechanical seal, Piping, Electrical, Instrumentation & Control along with Modbus connectivity.
A12	Design, Fabrication, Inspection Testing, Painting and Supply of Site Fabricated CS tank with internal coating	Design, Material Procurement, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning support for site fabricated carbon steel storage Tank Package including civil foundation, internal steam heating coils, cathodic protection, internal coating, external painting and insulation. Design Code : API 650 including Appendix F & M Diameter : up to 32 m Height : up to 15 m MOC : Carbon Steel + Internal Epoxy Coating
A13	Design, Manufacture, Fabrication, Inspection, Testing and Supply of Nitrogen Generation package	Design, Material Procurement, Manufacture, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning Supervision/ support for PSA type Nitrogen Generation package Packages along with package PLC and Modbus connectivity. <ul style="list-style-type: none"> • Capacity Range: 1500 NM³ /Hr, to 2000 NM³/hr • Capacity Range: 200 NM³ /Hr, to 400 NM³/hr • Pressure Rating: 12 to 18 bar(g)
A14	Design, Manufacture, Fabrication, Inspection, Testing and Supply of skid based Firefighting package	Design, Material Procurement, Manufacture, Fabrication, Inspection, Testing, Pre-commissioning & Commissioning Supervision/ support for Firefighting package which includes fire water storage tank, main pump, engine driven pump, jockey pumps etc. as per applicable codes and standards. Approximate capacity range as follows, <ul style="list-style-type: none"> • DIESEL FIRE WATER PUMP PACKAGE 1200 M3/hr 2200 M3/hr. • Jockey pump : 200 to 350 M3/hr • Foam concentration tank : 4 M3 to 6 M3 With appropriate fire water storage tanks.
A15	Water / Oil Bath type - Heater Package	Design, Procurement, Fabrication, Inspection, Testing, Supply, Pre-commissioning and Commissioning support of Water/ Oil Bath Type Heat exchanger, for heating process fluid as per applicable codes and standards. Water bath heater to be complete with Electrical and Instrumentation systems certified EEx"d" suitable for IEC Zone-2 & PLC for controls.

Sub Package Ref No.	Item Description	Brief Technical specification
A16	Test Separator Skid for Well fluids	<p>Design, Material Procurement, Fabrication, Inspection, Testing, Pre-Commissioning & Commissioning support for skid mounted test separator, complete with electrical, Instrumentation certified Eex"d" suitable for Zone-2.</p> <p>MOC : Carbon Steel + Internal Epoxy Coating Removable Internals : Duplex SS</p>
A17	Progressive Cavity Pump (PCP)	<p>PC Pumps shall be as per API 676 3rd edition, Pump shall be low speed, low shear type for polymer injection application:</p> <ul style="list-style-type: none"> • Fluid: Concentrated Polymer Solution • Viscosity: 2000 - 4000 cP • Viscosity degradation: up to 2% • Temperature: 70° C • Rated flow: 20 m³/hr and above • Differential Pressure: 50 bar to 150 bar • Capacity control: VFD • MOC Wetted Component: Duplex SS
G25	Pressure Regulator for Polymer Injection	<p>The no-shear coil based pressure reducing arrangement handling high viscous polymer solution shall be capable of creating adjustable linear pressure drops from 120 bar to 5 bar in stages, and shall be suitable for handling high viscous Polymer Mother Solution (1500 to 3500 cP).</p> <p>The capacity of each unit shall be 600 to 6000 bbl/day of Polymer Solution without causing viscosity degradation.</p> <p>The system shall be designed for high pressure operations (up to maximum 145 barg & compatible to saline water) and shall be installed on standalone frames suitable for installation in Oil and Gas Facilities.</p> <p>Pressure regulators shall be able to operate under similar ambient/desert conditions with PTR (proven track record).</p> <ul style="list-style-type: none"> • Fluid: Concentrated Polymer Solution • Viscosity: 1500 to 3500 cP • Temperature: 70° C • Pressure; adjustable linear pressure drops from 120 bar to 5 bar • Maximum Operating Pressure: 145 bar • Flow: 600 to 6000 bbl/day
G26	Low Shear Control Valves	<ul style="list-style-type: none"> • Low Shear Control Valve sizes ranging from 1" to 14", ANSI Class 150/300/600/900/1500/2500. • MOC: CS/SS/DSS body with DSS/Hastalloy-C trim, including anti cavitation and anti-noise trims, leakage class IV, Pneumatic actuator with Atex certified Explosion proof. • Low Shear Type and suitable for Controlling high viscous Polymer Mother Solution (1500 to 3500 cP) and to handle 600 to 6000 bbl/day of Polymer Solution with maximum allowable viscosity degradation up to 3%.

Pre-Qualification Criteria for Sub - Packages A1 - A17, G25 & G26

- Demonstrate similar supplies to Oil & Gas / Energy projects / Industrial Plants in the past Seven (07) Years and in operation.
- Demonstrate manufacturing facility and capability.
- Demonstrate in-house engineering capability to handle Structural, Mechanical, Piping and Instrumentation associated with the package.
- Furnish current list of sub suppliers for valves, instruments, pipes, fittings, etc.
- Demonstrate in-house QA/QC capabilities.
- Demonstrate in-house testing facility.
- Details of Frame Agreement/Term Contract with local and international Clients if any.
- Details of latest software to carry out engineering.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A1

- Vendor shall be a regular manufacturer / fabricator - supplier of similar skid mounted Pig Launcher / receiver and shall demonstrate his past track record for the same in the past Seven (07) Years.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for items A2, A3, A13

- Demonstrate past track record of supplies of at least two validly similar Skids/ Packages during the last seven (07) years, out of which one (01) shall be successfully in operation for at least 8000 hours without any major breakdown.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A4.

- Vendor shall be a regular packager / integrator, supplier of EDG and shall demonstrate past track record of supplies of similar packages during the last seven (07) years, out of which one (01) shall be successfully in operation for at least 8000 hours without any major breakdown.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A5

- Vendor shall be a regular fabricator - supplier of similar skid mounted MPFM.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for items A6, A7, A8, A10

- Demonstrated track record of past supplies of similar package.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A9

- Demonstrate track record of past supplies of similar package during the last seven (07) years including obtaining of necessary patented /proprietary design / drawing, licenses etc. as applicable.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A11

- The vendor shall be an established manufacturer of API - 610 Centrifugal pumps.
- The vendor shall have designed, engineered, packaged, tested and supplied during the last Seven (7) years, from the proposed manufacturing plant, at least TWO (2) validly similar Centrifugal pump packages which shall have completed ONE (1) Year of satisfactory operation at site.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A12

- Vendor shall be a regular fabricator of similar field fabricated CS internally coated tanks and shall demonstrate his past track record for the same in the past Seven (07) Years.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A14

- Vendor shall be a regular manufacturer / fabricator - supplier of similar skid mounted Fire Fighting Package and shall demonstrate his past track record for the same in the past Seven (07) Years.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A15

- Vendor shall be a regular manufacturer / fabricator - supplier of similar skid mounted Water Bath Heater and shall demonstrate his past track record for the same in the past Seven (07) Years.

Specific Pre - Qualification Criteria ("GO"/"NO GO") for item A16

- Vendor shall be a regular manufacturer / fabricator - supplier of similar skid mounted Test Separator and shall demonstrate his past track record for the same in the past Seven (07) Years.

Specific Pre-Qualification Criteria (“GO”/”NO GO”) for item A17

- Vendor shall be an established manufacturer of API - 676 Progressive Cavity Pumps.
- Vendor shall have Designed, Engineered, Packaged, Tested and Supplied during the last Seven (07) years, from the proposed manufacturing plant, at least Two (02) validly similar Progressive Cavity Pumps packages which shall have completed One (01) Year of satisfactory operation at site.
- Pumps supplied shall be similar in terms of power rating, Hydraulics, Inlet flow, Differential Pressure, Operating Pressure, Pumping liquid, Speed, Mechanical design, Materials etc.

Specific Pre-Qualification Criteria (“GO”/”NO GO”) for item G25

- Vendor should have carried out supply of the no-shear coil based pressure reducing arrangement handling high viscous polymer solution meeting the technical criteria specified in the “technical requirement” section above in the last Seven (07) years.

Specific Pre-Qualification Criteria (“GO”/”NO GO”) for item G26

- Vendor shall have Designed, Engineered, Packaged, Tested and Supplied during the last Seven (07) years, from the proposed manufacturing plant.
- Vendor shall have Past track record of Valves with flow rates & viscosity degradation limitation as per above technical requirement.
- Vendor to supply the customer satisfaction certificates at least from two customers in O&G field.

Only those contractors (both Indian & International) possessing substantial and proven record in manufacturing/ supply of above items/ packages of similar scale with excellent delivery schedule & who are interested to enter into Long Term Contract should respond to this EOI. Contractors are requested, as a minimum, to submit the documents listed against the foregoing packages.

In addition to the above requested document, contractor shall also submit credentials to support the specific qualification criteria for each package.

Companies are requested, as a minimum, to submit the following documents and details:

1. Letter of interest with detailed company information, **sub - package reference number and list of submitted documents.**
2. Technical Catalogue of the Item/ Package with lead time for manufacturing.
3. Lists of similar supplies successfully executed in the last seven (07) years and those of currently under execution with delivery performance records, job value, client certification, client references etc. (with emphasis of work carried out in Oil and Gas / Energy Sector / Industrial Plants).
4. Company’s manufacturing set up with Capacity details and Geographical location.
5. Current Shop floor loading chart.
6. Experience of working in remote onshore location & desert terrain.
7. Quality assurance/control practices and certifications to manufacture such items.
8. Health, Safety and Environment (HSE) policies, certifications, procedures and statistics on HSE performance covering the last seven (07) years.
9. Company’s financial performance documents (Audited Balance sheets and Profit and Loss statements, Auditors Report and Notes to Accounts etc.) for last two (02) years. Latest financial statement should not be older than 12 months on the date of Expression of Interest.

The following financial evaluation criteria will be used for evaluation of financial standing and the contractors not meeting any of the criteria shall be disqualified from the bidding process :

- Turnover in each of the immediately preceding two (02) financial years should be equal to or more than the estimated average annual contract value.
- Positive Net Worth in each of the immediately preceding two (02) financial years.
- Liquidity ratio in each of the preceding two (02) financial years shall not be less than 0.60.

Note: Stand-alone Trader / Stockist / Dealer** mean an Independent Entity which is NOT owned by and/or affiliated to and / or a part of the Original Manufacturer(s).

Also, note -

i. Normally standalone financials of the bidding entity will be considered. However, consolidated financials at the bidding entity level, if available, can also be submitted. Parent company or Affiliate’s financials can be submitted and considered, subject to submission of Parent / Affiliate company guarantee. This should be clearly mentioned in the EOI response.

ii. In case of consortium, the financials of the leader of the consortium (in whose name the bid is submitted) will be evaluated. However, consortium partner's financials can also be considered subject to submission of corporate guarantee by such consortium partner. This should be clearly mentioned in the EOI response.

iii. Evaluation will be done only on the basis of the published Annual Reports / Audited financials containing Auditor's report, Balance sheet, Profit & Loss Account and Notes to the Accounts.

iv. In case of unaudited statements (if there are no audit requirements for auditing of financials as per the local law), the financials shall be accompanied by a certificate from a Certified Accountant. Certificate should also mention the fact that there is no requirement of audit of the financials as per the local law.

All qualifications and exceptions brought out in Auditor's report and Notes to Accounts would be factored in while undertaking financial evaluation.

The interested contractors should evince interest to participate in the Expression of Interest by clicking on the **"Evince Interest"** link for the corresponding EOI listing on the Cairn India Limited website i.e. <http://www.cairnindia.com> and submit their contact details online. Further to this, interested contractors would be invited to submit their response via **Smart Source** (Cairn's e Sourcing Platform). The contractors would be requested, as a minimum, to submit the above documents and details for prequalification via **Smart Source** within Twenty Eight (28) days of publication of this EOI.