



Energy for India

CAIRN ENERGY INDIA PTY LIMITED

(Incorporated in New South Wales, Australia – ACN 002 066 784)

GLOBAL EXPRESSION OF INTEREST (EOI) FOR PROCUREMENT PACKAGE FOR BHAGYAM AND AISHWARIYA FIELD DEVELOPMENT AND MPT CAPACITY EXPANSION PROJECT

PACKAGE REF:- EP/BA/P3

Cairn Energy India Pty Ltd. ("CEIL") is the Operator on behalf of Joint Venture partners CEIL, Cairn Energy Hydrocarbons Limited and Oil and Natural Gas Corporation, 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 discoveries namely Mangala, Bhagyam, Aishwariya and other fields. The Mangala field is the largest onshore oil discovery in India since 1985. The Mangala field development consists of well pad facilities and processing hub named Mangala Processing Terminal (MPT) which is currently under implementation.

It is now proposed to develop Bhagyam field consisting of 15 Well pads & Aishwariya field consisting of 9 Well pads with infield and trunk pipeline, OHL and other infrastructure facilities and augment the processing capacity of MPT by addition of new processing equipment.

CEIL on behalf of its joint venture partners, invites reputed contractors (Indian & International) with demonstrated HSE performance to express their interest for prequalification to participate in International competitive bidding for the packages listed below. The scope includes design, shop fabrication/manufacturing, factory acceptance test, inspection, testing, supply pre-commissioning & commissioning support (wherever applicable)]

PACKAGE REF:- EP/BA/P3

Sub Package Ref	Brief Technical specification	Tentative Qty
PACKAGE A : LINE PIPES		
1	API 5L X65 Line Pipe API 5L X65, ASME Class 600/900/1500 Line Pipe in accordance to PSL-2 with Epoxy Coating / PUF insulation for the following sizes : <ul style="list-style-type: none">• Seamless from 2" to 16" having thickness 5.6mm to 18mm• HSAW/LSAW above 16" to 30 " having thickness 9.5mm to 32 mm Interested Parties may express their interest for supply of Bare pipes/Coated pipes/ coating only /Coating& Insulation/ Insulation only Specific qualification Criteria- a.)Demonstration of supplies of 2000 MT of Seamless and/ or 5000 MT of HSAW/LSAW of API 5L X-65 grade Pipe in the above size range for a single Project. b) Demonstration of manufacturing capability of 4000 tonnes/per month of X-65 grade Pipe in above size range. c) Capabilities of external coating shop in terms of proven track record and availability for the pipes sizes as specified above.	200 Km
PACKAGE B : HDPE PIPELINE		

Sub Package Ref	Brief Technical specification	Tentative Qty
1	<p>HDPE Pipeline</p> <p>2" to 6" HDPE Pipeline suitable for pipeline system under AWWA C 906, API 15 LE, ASTM D 3350, ASTM F 714, or equivalent BIS Codes.</p>	75 Km
PACKAGE C : API 610 PUMPS		
1	<p>High pressure pumps (API 610 pumps latest Edition)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support for Centrifugal pump package (Electric Motor driven) having suitable Plan auxiliaries, capacities ranging from 350 m3/hr to 800 m3/hr with Differential Pressure (DP) ranging from 7000 kpa to 12000 kpa along with Package PLC panel and Vibration monitoring system.</p> <p>Specific Qualification Criteria – Demonstrated track record of past supplies of similar pump skids with minimum operation of 8000 hrs in one year.</p>	3nos
2	<p>High Capacity Pumps (API 610 pumps latest Edition)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support for Centrifugal pump package (Electric Motor driven) for Hydrocarbon/water service having suitable Plan auxiliaries, capacities ranging from 100 m3/hr to 250 m3/hr, Differential Pressure(DP) ranging from 200 kpa to 800 kpa, with Package PLC panel and Vibration monitoring system.</p> <p>Specific Qualification Criteria- Demonstrated track record of past supplies of similar pump skids with minimum operation of 8000 hrs in one year.</p>	4 nos
3	<p>High Capacity Pumps (API 610 pumps latest Edition)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support for Vertical can type pump package (Electric Motor driven) for Hydrocarbon/water service having suitable Plan auxiliaries, capacities ranging from 350 m3/hr to 1400 m3/hr, Differential Pressure(DP) ranging from 500 kpa to 1000 kpa, with Package PLC panel and Vibration monitoring system.</p> <p>Specific Qualification Criteria- Demonstrated track record of past supplies of similar pump skids with minimum operation of 8000 hrs in one year.</p>	3 nos
PACKAGE D :PRODUCTION VESSEL		

Sub Package Ref	Brief Technical specification	Tentative Qty
1	<p>Carbon Steel efficient Production separator (ASME SEC VIII Div 1)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply pre-commissioning and commissioning of Efficient Production Separator (1 no). The Vessel will be equipped with emulsion separation, heating (preferably electro-static) and stabilization facilities to reduce BS&W from 70% in input stream to 10% or lower in the outlet oil stream. Approximate Internal diameter ranging 5 m to 6 m with lengths ranging 25 m to 28 m. Design pressure of 1034 kpag and full vacuum at 135 Deg C suitable for waxy crude oil application.</p> <p>Specific Qualification Criteria-</p> <p>a) Demonstrate experience in supplying vessels exceeding 80 to 100 MT weight in size ranges as specified above.</p> <p>b) Details of rolling capacity (Diameter / thickness etc.), shop handling capacity, welding capabilities/techniques and post weld heat treatment & hydro testing capabilities.</p> <p>c) U-stamp Certification document.</p> <p>d) Process performance guarantees.</p>	1 no
PACKAGE E : DEHYDRATOR		
1	<p>Carbon Steel Electro-static dehydrator (ASME Sec VIII Div 1)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Electro-static dehydrator with transformer including process guarantee for waxy crude oil service. Approximate size 4.5 m to 5 m diameter and 20 m to 25 m length. Design pressure 1034 kpag and full vacuum at 135 Deg. C.</p> <p>Specific Qualification Criteria-</p> <p>a.) Demonstrate Experience in supplying vessels exceeding 80 to 100 MT weight in size range as specified above.</p> <p>b) Details of rolling capacity (Diameter / Thickness etc.), shop handling capacity, welding capabilities/techniques and post weld heat treatment & hydro testing capabilities.</p> <p>c) U-stamp Certification document</p> <p>d) Proven Technology/process licensor with Agreement/MOU and contact details.</p>	1 no
PACKAGE F : FILTRATION SYSTEMS		
1	<p>Injection water Walnut Shell filtration package</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Injection water Walnut Shell filtration package of operating capacity 1500-2500 m³/hr having Design parameter of 1700 kPag @ 120 Deg C with process performance guarantee for removal of oil and particulate matter from injection water. Capable of 100% removal of suspended particles with size 5 microns and above. Package shall be provided with dedicated PLC control panel. Bidder shall have proven track record of minimum two years of operation for similar item.</p> <p>Specific Qualification Criteria-</p> <p>a) U-stamp Certification document.</p>	1 no.

Sub Package Ref	Brief Technical specification	Tentative Qty
2	<p>Raw water Filtration package (Pressure Sand filters)</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Raw water Filtration package with operating capacity of 175 m³/hr Design parameters: 700 kpag @ 60 Deg C. with Process performance guarantee for removal of particulate matter from raw water & Capable of 100% removal of suspended particles with size 10 microns and above. Package shall be provided with dedicated PLC control panel. Bidder shall have proven track record of minimum two years of operation.</p> <p>Specific Qualification Criteria- a) Bidder to provide U-stamp Certification document.</p>	1 no
PACKAGE G : INSTRUMENT AIR SYSTEM		
1	<p>Instrument air compressor package</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support for Rotary Screw compressor skid, Capacity: 60-100 m³/hr at 1034 kpag, including after-coolers, liquid separators, dryers, pre-post filters and receiver, with skid mounted package PLC panel.</p>	24 nos
PACAKAGE H: CHEMICAL INJECTION SYSTEM		
1	<p>Chemical injection skids.</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Chemical Injection Skid for Demulsifier/ Reverse Demulsifier/ Scale inhibitor/ Anti-foam/ Polyelectrolyte chemical/ Biocide / Oxygen scavenger / Coagulant with dosing tank 10 to 160 m³ capacity with two dosing pumps, rate: 20 to 500 LPH.</p> <p>Specific Qualification Criteria- Demonstration of proven track record of supplies made and in operation for minimum two years.</p>	8 nos.
2	<p>Chemical injection skids.</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Chemical Injection Skid for Demulsifier / Corrosion inhibitor / Scale inhibitor injection skid, 9 m³ Tank capacity, each with 2 nos LP dosing pumps, rate: 5-50 LPH at 1200 kpa Differential Pressure(DP) and 2 nos HP dosing pumps, rate: 5-50 LPH at 21000 kpa Differential Pressure(DP).</p> <p>Specific Qualification Criteria- Demonstration of proven track record of supplies made and in operation for minimum two years.</p>	72 nos
PACKAGE I: SHELL & TUBE HEAT EXCHANGER		

Sub Package Ref	Brief Technical specification	Tentative Qty
1	<p>Production Fluid Heater</p> <p>Design, Material Procurement, Fabrication, inspection, testing, supply, pre-commissioning and commissioning support of Shell & Tube heat exchanger, having approx 20000KW -25000 KW heat duty for heating crude oil emulsion using MP steam on tube side. Design pressure 1800 kpag and Full vacuum at 220 Deg. C with IBR approvals as applicable.</p> <p>Specific Qualification Criteria-</p> <p>a.) Demonstrate experience in supplying vessels exceeding 50 MT weight</p> <p>b) Details of rolling capacity (Diameter / thickness etc.), shop handling capacity, welding capabilities/techniques and post weld heat treatment & hydro testing capabilities.</p> <p>c) U-stamp Certification document.</p> <p>d) The Thermal Design Capabilities using HTRI or equivalent software needs to be demonstrated by the bidder.</p>	1 no

Only those bidders possessing substantial and proven record in turn key supply of above Equipments/packages of similar scale meeting the expected delivery schedule should respond to this notice.

Bidders are requested, as a minimum, to submit the documents listed against package A to I

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

1. Letter of interest with detailed company information
2. Technical Catalogue of the Equipment/packages
3. Lists of similar supplies successfully executed in the last three years and those of currently under execution with delivery performance records, job value, client certification, client contact references etc. (With particular emphasis on work carried out in Oil and Gas sector).
4. Company's manufacturing set up with Capacity details and Geographical location.
5. Current Shop floor loading chart.
6. Experience pertaining to mechanical design software packages such as PVELite/COMPRESS/CODECALC, wherever applicable.
7. Quality assurance/control practices and certifications to manufacture such item/packages.
8. Health, Safety and Environment (HSE) policies, certifications, procedures and statistics on HSE performance covering the last 3 years.
9. Company's financial performance documents (Audited Balance sheets and Profit and Loss statements etc.) for last 3 years.

CEIL requests interested bidders to submit their Expression of Interest for any / all of the above packages, clearly specifying the **Package Ref. No./Sub-package Ref. No. with item description** {example – Ref No. EP/BA/P3-E for Dehydrator} along with pre-qualification documents to the below address within fourteen (14) days of publication of this EOI by email as attached PDF File and via courier to:

Director – P&SCM

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