

**INDIAN AIR FORCE INVITES
EXPRESSION OF INTEREST (EOI)**

**REPAIR AND OVERHAUL OF (18) AL-31 FP AERO ENGINES
PERTAINING TO SU-30 MKI AIRCRAFT FLEET**

**(DIRECTORATE OF ENG A1)
AIR HQ (VB)**

Eoi Reference SI No: EOI No.1/Air HQ/81707/9/Eng A1 /2022-23

Introduction

1. Directorate of Eng A1, Air HQ (Vayu Bhawan), on behalf of The Ministry of Defence, Government of India, invites **Expression of Interest (Eoi)** for **Repair and Overhaul (ROH) of Qty-18 AL-31 FP Aero Engines of Su-30 MKI for five years** from reputed Indian firms based in India having technical and financial capability, infrastructure and experience to execute the project. The project will involve development of facilities, certification of airworthiness and delivery within strict timelines.

Details of work

2. **Scope of Work.** The scope of work includes: -
- (a) Repair and Overhaul (ROH) of **Qty-18 AL-31 FP Aero Engines of Su-30 MKI** aircraft for five years at India by reputed firms. Brief details of Aero Engine is placed at **Annexure I** to this Eoi.
 - (b) The task encompasses development of requisite Jigs, Fixtures, Test Bench facilities, their installation, commissioning, including repair and overhaul facilities for AL-31FP Aero Engine and the aggregates, packing and dispatch facilities etc.
 - (c) It is to be noted that the testing of aero engine would be undertaken in accordance with pre-specified procedure by the deemed OEM.
3. **In the First Phase.** The vendor would need to study the function and testing requirement in respect of each aero engine, so as to conceptualise the facility required to be set-up.
4. **In the Second Phase.** The vendor has to independently carry out all the mentioned activities, within pre-stipulated timelines. The overall regulatory and quality control would be exercised RCMA (CEMILAC) and DGAQA respectively.
5. **Airworthiness requirements.** Meeting all airworthiness requirements shall be the responsibility of the firm with due certification from RCMA (CEMILAC) and DGAQA.

6. Pre-bid meeting will be in the form of joint evaluation/clarification of proposals submitted by industrial partners with participation of industrial bodies. This meeting will shortlist eligible proposals which will determine the scope of the Tender Enquiry. The meeting would be held on **03 Mar 23 at 1100 hrs at Air HQ (VB), New Delhi.** For further queries about Eol please contact **011-23010231 (Extn 5239/7245/7249) between 0930 hrs to 1700 hrs till 02 Mar 23.** (email: tripssky.dive@gov.in). Technical details are available at Dte of Eng A1 at Air HQs. Visit of the vendors to the facilities, if required, shall be co-ordinated and facilitated by the Dte of Eng A1.

7. **Place, Time and Date for response to Eol submission** The response to Eol to be submitted on tripssky.dive@gov.in or to be dropped in **ACAS Eng A, Tender Box No.1 kept at Air HQ (VB)**, on **10 Mar 23 at 1000 hrs** and opening of bid time is **1100 hrs at 10 Mar 23**. Vendor Information is to be filled as per **Annexure II**.

Eligibility Criteria

8. Only Indigenous firms based in India and possessing experience in Design, development, repair, overhaul and certification of electronic/ electro-mechanical / mechanical/ electrical/ aero engine/ avionics used in aircraft whose proposals have been shortlisted by the proposal review committee would be eligible. Interested firms may also enter into 'Joint Ventures' with other firms who are capable of undertaking similar tasks, including foreign OEMs under umbrella of Inter-Governmental Agreement or otherwise.

9. Following documents/evidence are expected to be submitted by interested firms willing to undertake IAF task in endeavour for '**Self Reliance in Maintenance**':-

(a) **Financial Capacity**. Details of financial capability of interested firms in the form of Balance Sheet and ITR of last three financial years including average turnover, certified by a CA.

(b) **Certification**. Details of quality certification held with the firm.

(c) **Registration**. Details of registration status of the firm as per Companies Act including MSME/ NSIC certification, if any.

(d) **Work Experience**. Details of experience in undertaking indigenous part tasking /ROH / MOH /Repair / Reclamation tasks with Defence, Govt. PSUs or any other agencies. Records of current/ similar projects in hand, their valuation and completion dates.

(e) **Technical Capability**. Firms responding to Eol should have following pre-qualification and must submit documents to support their eligibility.

(i) Must possess experience in aeronautical design, development, repair, reclamation, replacement, refurbishment, overhaul, life extension & certification of avionics aggregates / electronic / mechanical / electromechanical aggregates / airframes / aero engines and their aggregates.

(ii) Familiarity with IMTAR-2021, RCMA/CEMILAC certification procedures and preferably experience in certification of products and services.

(iii) Familiarity with supply chains for aeronautical quality components and material, special tools and machinery.

(iv) Availability of manufacturing and fabrication facility/ outsourcing (indicate plan and extent of outsourcing) as applicable to the project.

(v) List the in-house test facilities including those planned for outsourcing as applicable to the project.

(vi) Ability to generate the requisite human resource for the project through training and certification.

10. **Vendors should confirm that following conditions are acceptable:** -

(a) Solicitation of offers will be as per 'Single Stage-Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting technical and commercial offers together, but in two separate sealed envelopes. Validity of commercial offers should be till 30 Jun 23 or at least six months from the date of last submission of offers.

(b) Technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.

(c) Equipment / services of all TEC cleared vendors is likely to be put through a verification testing in India on a 'No Cost No Commitment' basis as considered necessary by the user. Vendor should confirm equipment availability / capability to provide services and willingness to participate in verification testing.

(d) Amongst the vendors cleared after trial evaluation, a Contract Negotiation Committee would decide lowest cost bidder (L1) and conclude appropriate contract. In cases, where verification testing / capability verification is not undertaken at first stage, user trials on the First of Production Model (FoPM) are likely to be conducted as required and L-1 vendor would be bound by the condition that **"The contract will be terminated by Buyer, and, Seller will forfeit his bank guarantee, if vendor fails to prove capabilities, capacity or the product supplied fails to meet desired performance as per specifications"**.

(e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools/ jigs/ fixtures for field and component level repairs.

(f) Vendor would be required to accept general conditions of contract given in the Standard Contract Document at Chapter VII of DPM-2009 (Supplement 2010).

- (g) **Warranty**. The equipment should have a warranty of **12** months.
- (h) **Product Support**. Vendor should be ready to provide after sales support. Cost of transportation & repair / restoration cost of equipment that requires support due to faulty performance attributable to vendor will be borne by the vendor.
- (j) **Training**. Training of approx. 15 maintenances personal up to D & I level is to be provided as per requirement of user at the user premises.
- (k) **Delivery**. All deliveries to be completed with 12 months of signing of contract.
- (l) **Infrastructure**. Vendor (s) should be able to demonstrate capability & capacity to undertake assigned task. User / buyer may undertake vendor site visit (s) to verify these aspects.

Note: The details are available in DPM-2009

Detailed Project Report (DPR)

11. The DPR will be submitted by all vendors in response to EOI along with: -
- (a) Outline features of the proposal.
 - (b) Estimated Capital Expenditure (As applicable).
 - (c) Roles, responsibilities and expertise details of consortium members, if any.
 - (d) Role of foreign technology provider, if any.
 - (e) Recommended stages/phases of task with priorities & time schedules.
 - (f) Requirement of specialised testing assistance where facilities are available only with government entities, DPSUs and DRDO/DGQA/DGAQA.
 - (g) Cost-sharing aspects as applicable.
12. Eoi response would be evaluated based on the supporting documents and physical verification of company's capability to execute the project by empanelled members of IAF in accordance with para 4.8.1 of DPM-2009 and RFP will be issued to vendors, prequalified through EOI.
13. Clarifications pertaining to Eoi may be sought from the following address: -

**Directorate of Eng A1
Air HQ (Vayu Bhawan)
Room No. 244
Rafi Marg
New Delhi - 110 106
(Tele: 011-23010231/ 2111-5239)
Fax: 011-23060125
E-mail: tigera1@iaf.nic.in/ tripssky.dive@gov.in**

14. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. IAF, Ministry of Defence, Government of India also reserves the right to withdraw it, should it be so necessary at any stage. The procurement process would be carried out under the provisions of DPM-2009 as amended from time to time.

Date:

New Delhi

Annexures: As stated

Note: -

DOCUMENTS REQUIRED FOR ATTENDING PRE BID MEETING

Interested firms have to forward the following details to attend the **pre-bid meeting**: -

1. Letter from firm for attending pre-bid meeting.
2. ID proof of representative (s)/ AADHAR Card details.
3. Residential address along with nearest police station.

Date.....

(Signature of Firm Rep
attending Pre Bid Meeting)

Place.....

Rubber stamp of Firm

Annexure-I
(Refers to Para 2 (a) of EoI)

BROAD OPERATIONAL REQUIREMENTS

REPAIR AND OVERHAUL OF AL-31FP AERO-ENGINE OF SU-30MKI AIRCRAFT

SI No	GIG No	Part No	Description	DOQ	Qty
1	1366524	AL-31 FP (LH)	Aero Engine	Each	09
2	1366523	AL-31 FP (RH)	Aero Engine	Each	09

TECHNICAL SPECIFICATIONS OF AL-31FP AERO-ENGINE

1. The SU-30 MKI aircraft is powered by two AL-31 FP aero engines and Su-30MK2 by 02 x AL-31F aero engine. The main difference between the two is absence of Thrust Vector Control Nozzles on AL-31F. The engines are by pass turbojet with twin spool axial flow compressor. The engine has the following special features: -

- (a) It is a by-pass engine and Mass flow of exhaust gases is increased by addition of by-pass air at the exit, thereby increasing propulsive efficiency.
- (b) Guide vanes of LP compressor and HP compressor are variable and regulate the airflow to LP compressor and HP compressor depending on engine rating.
- (c) The engine has convergent – divergent swivelling exhaust nozzle, which enables efficient expansion of exhaust gases for improved engine performance and high maneuverability.
- (d) The engine parameters are automatically controlled by electronic engine controller (KRD – 99B).
- (e) The engine has a “Special” mode of operation with certain limitations (BP Mode) to have additional thrust in combat operations. In this mode, the thrust increases by 6 to 8% (750 – 1000 kgs) above max reheat thrust.
- (f) Anti surge system incorporated in this engine ensures suitable corrective action in case of surge.
- (g) Effective and efficient cooling of engine turbine.
- (h) A very high thrust to weight ratio.
- (j) Positive relights (Auto and Manual).

(k) Effective monitoring, sensing and recording of engine parameters, thus providing all information to assess the engine condition.

2	<u>Additional Aspects</u>	
	<u>Certificate of Compliance.</u> To be issued by OEM or certified by CEMILAC.	
	<u>Quality Assurance Cover.</u> To be provided by OEM or DGAQA.	
	<u>Infrastructure.</u> Vendor (s) should be able to demonstrate capability & capacity to undertake assigned task. User / buyer may undertake vendor site visit (s) to verify these aspects	

Annexure-II
(Refers to Para 7 of EoI)

VENDOR INFORMATION PROFORMA

1. **Name of the Vendor/Company/Firm.**

(Company profile including share holding pattern, in brief, to be attached)

2. **Type (Tick the relevant category).**

Original Equipment Manufacturer (OEM) Yes/No

Authorised Vendor of foreign Firm Yes/No (attach details, if yes). Such as OEM certificate indicating that the vendor is designated as capable / competent of undertaking assigned task. This certificate will be subjected to verification by IAF through a competent authority.

Others (give specific details)

3. **Contact Details.**

Postal Address:

City: _____

State: _____

Pin Code: _____

Tele: _____

Fax: _____

URL / Web Site _____

4. **Local Branch/Liaison Office in Delhi (if any).**

Name &Address:

Pin code:

Tel:

Fax:

5. **Financial Capability Details.**

(a) Category of Industry (Large/medium/small Scale):

(b) Annual turnover for last three years: In Rs

(c) Number of Employees in Firm:

(d) Details of Manufacturing Infrastructure:

6. **Technical Capability Details.** Earlier contracts with Indian Ministry of Defense/ Government agencies for same / similar class of equipment.

Contract Details with Ref Number	Equipment	Quantity	Cost

7. **Certification by Quality Assurance Organisation / Military Airworthiness.**

Name of Agency	Certification	Applicable from (Date &Year)	Valid till (Date &Year)

8. **Details of Registration.**

Agency	Registration No.	Validity up to (Date)	Equipment
GeM			
DGQA/DGAQA/DGNAI			
OFB			
DRDO			
Any other Government Agency			

9. **Membership of FICCI /ASSOCHAM /CII or other Industrial Associations.**

Name of Organisation:

Membership Number:

10. **Equipment/Product Profile (to be submitted for each product separately) for Assessment of Work Experience.**

- (a) Name of Product: __
- (b) Description (attach technical literature): _____
- (c) Whether OEM or Integrator: _____
- (d) Name and address of foreign collaborator (if any): _____
- (e) Industrial License Number: _____
- (f) Indigenous component of the product (in percentage):
- (g) Status (in service /design & development stage):
- (h) Production capacity in one year.
- (j) Countries/agencies where equipment supplied earlier (give details of quantity supplied):

- (a) Estimated price of the equipment approximately Rs _____

(Details that go into determining the cost of the scheme, including factors such as Annual Maintenance Contract (AMC), product support package, training etc. to be indicated by the vendor).

- (l) Any additional development cost required to be incurred (with amount) and amortization plan.

11. **Undertaking**

It is certified that the Company/SME Unit has adequate capability for production/manufacturing /system integration/ ROH for the product (s) being procured as well as the capability for maintenance and life cycle support for such product(s).

12. **Declaration.** It is certified that the above information is true and any change will be intimated **within seven days of submission of EoI.**

(Authorised Signatory)