EXPRESSION OF INTEREST (EOI)

DIESEL ENGINE DRIVEN HIGH-CAPACITY PUMP SET FOR EMERGENCY WATER TRANSFER TO FIREFIGHTING RESERVOIR

EOI No.: EOI/FE/01/2026

DESCRIPTION: Supply and commissioning of diesel engine driven high-capacity pumpset for emergency water transfer application.

1. INTRODUCTION

Oil India Limited (OIL) invites Expression of Interest (EOI) from reputed, experienced, and technically competent manufacturers / OEMs / authorized packagers / system integrators for supply of a Diesel Engine Driven High-Capacity Pump Set intended for emergency water transfer applications in support of firefighting operations.

The pump set shall be engineered for rapid deployment and sustained operation during crisis situations such as:

• Well blowouts

• Major oil fires

• Hydrocarbon emergencies

• Disaster response scenarios (Similar to Baghjan / Kharsang incidents in OIL INDIA LTD)

The primary objective of the system is to **transfer large volumes of water from an available natural source (river/pond/open water body) to a designated reservoir or pond located near the firefighting area**, from where dedicated firefighting pumps shall draw water for fire suppression activities.

2. APPLICATION REQUIREMENT

The pump set shall:

• Draw water from rivers, ponds, or temporary reservoirs.

• Operate reliably under suction lift conditions.

• Transfer water over long distances to a secondary storage reservoir/pond located near the firefighting zone.

• Ensure adequate and continuous filling of the reservoir to support uninterrupted firefighting pump operation.

• Operate for prolonged durations under emergency conditions.

• Be deployable at remote and logistically challenging field installations.

3. TECHNICAL SPECIFICATIONS

3.1 Pump Hydraulic Parameters

Parameter	Requirement
Capacity	450-500 Kilolitres per Hour (KLPH) minimum
Equivalent Flow	Approx. 111 Litres per Second (LPS)
Total Head	Minimum 120-150 meters
Suction Lift	Approx. 7 meters minimum
Duty	Continuous duty
Safety Margin	Minimum 10% margin on rated head and power

The total head shall be sufficient to overcome:

• Static suction lift

• Pipeline friction losses over long distance

• Minor losses (bends, valves, fittings)

• Elevation difference (if any) between source and destination reservoir

Vendor shall provide performance curves clearly indicating operating point and efficiency.

3.2 Pump Type & Construction

• Type: Horizontal multistage centrifugal pump / split case pump suitable for high-head water transfer

• Design Standard: Suitable for continuous high-pressure duty

• Casing Material: Cast steel / Ductile iron

• Impeller Material: Bronze / SS 316 (abrasion-resistant)

• Shaft Material: Alloy steel / Stainless steel

• Mechanical Seal: Heavy-duty mechanical seal suitable for dirty water

• Bearings: Heavy-duty anti-friction type

3.3 Suitability for Raw & Impure Water

The pump shall be specifically designed to handle raw river/pond water which may contain:

• Sand

• Silt

• Mud

• Suspended solids

• Organic debris

• Floating impurities

Design Requirements:

• Pump shall tolerate suspended solids without rapid wear or choking.

• Wetted parts shall be abrasion resistant.

• Replaceable wear rings shall be provided.

• Internal design shall minimize erosion.

• Seal system shall be suitable for contaminated water.

• Impeller passages shall be designed to reduce clogging risk.

Vendor must clearly specify:

• Maximum allowable particle size

• Maximum suspended solids concentration

• Recommended maintenance interval under dirty water service

3.4 Anti-Clogging & Protection Features

• Heavy-duty non-clog suction strainer

• Easily cleanable suction arrangement

• Provision for quick debris removal

• Coarse pre-filtration arrangement (preferred)

Design shall ensure uninterrupted water transfer even in presence of debris.

4. DIESEL ENGINE REQUIREMENTS

4.1 Engine Make: Caterpillar

4.2 Engine Specifications

• Continuous rated power suitable for pump duty

• Minimum 10% power margin over pump shaft power

• Water-cooled engine

• Suitable for 50°C ambient temperature

• 24V electric start system

• Manual backup start provision

• Heavy-duty radiator

• Spark arrestor in exhaust

• Fuel tank capacity for minimum 8 hours continuous operation

• Engine protection for:

o Low oil pressure

o High coolant temperature

o Overspeed

o Any other relevant protection

Engine shall be designed for reliable operation in remote oilfield conditions.

5. SUCTION SYSTEM – CRITICAL REQUIREMENT

Since the pump will operate under suction lift (7 m), suction reliability is critical.

5.1 Priming System

• Vacuum-assisted priming system OR automatic priming system

• Self-priming capability (if applicable)

• Heavy-duty foot valve with reliable sealing

5.2 Prevention of Suction Failure

The design shall ensure:

• No loss of prime due to minor air leakage

• No cavitation at specified suction lift

• Adequate NPSH margin

• Protection against dry running

• Ability to re-prime automatically after suction disturbance

Vendor shall provide:

• NPSH Required value

• Confirmation against cavitation at 6–7 m suction lift

• Detailed suction calculation sheet

Preferred features:

• Vacuum gauge on suction

• Suction pressure sensor

• Automatic shutdown on dry run

6. DISCHARGE ARRANGEMENT

• Suitable discharge flange (minimum 6” / 8”)

• Provision for long-distance delivery pipeline connection

• Non-return valve

• Pressure gauge

• Compatibility with reusable high-pressure delivery pipeline system

The discharge system shall be designed for continuous transfer to secondary reservoir without pressure instability.

7. SKID / MOBILITY REQUIREMENT

Pump set shall be:

• Heavy-duty skid mounted for easy mobility

Features:

• Lifting hooks

• Forklift pockets

• Anti-vibration mounts

• Weatherproof acoustic canopy

• Corrosion-resistant coating

• Suitable for outdoor deployment

8. CONTINUOUS EMERGENCY OPERATION CAPABILITY

The pump set shall:

• Operate continuously for minimum 8–24 hours

• Withstand high load under emergency duty

• Prevent overheating due to dirty suction water

• Maintain bearing and seal integrity under prolonged operation

9. DOCUMENTATION

Vendor shall submit:

• GA drawing

• Performance curves

• Power calculation sheet

• Suction calculations

• Hydraulic calculation for long-distance transfer

• O&M manual

• Recommended 2-year spare list

• OEM authorization certificate

10. AFTER SALES SUPPORT

Vendor must confirm:

• Service support availability in India

• Spares availability for minimum 10 years

• On-site commissioning

• Operator training

11. VENDOR ELIGIBILITY

Vendor shall provide:

• Similar high-capacity water transfer pump supply references

• Client certificates

• Technical brochures

• Details of emergency deployment experience

12. SPECIAL EMERGENCY RELIABILITY CLAUSE

The pump set shall be specifically engineered for emergency disaster response applications involving impure water sources, long-distance water transfer, and high suction lift conditions. The design shall ensure uninterrupted reservoir filling without suction failure, cavitation, clogging, erosion damage, or rapid component wear during crisis deployment.

13. OBJECTIVE OF EOI

This EOI aims to:

• Identify technically capable vendors

• Assess available technologies

• Finalize specifications

• Proceed to formal tendering

14. SUBMISSION OF EXPRESSION OF INTEREST:

Interested parties are requested to submit their EOIs in electronic format to **saurav.medhi@oilindia.in**, **dj_sonowal@oilindia.in** or hard copy may be submitted to the following address no later than 02.04.2026:

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15. GENERAL NOTES:

- All submissions must be self-certified, clear and legible.
- This EOI does not constitute a commitment by OIL for any procurement.
- OIL reserves the right to accept or reject any or all EOIs without assigning any reason.
- Selected parties may be invited for technical discussions or site visits as needed.

16. CONFIDENTIALITY:

All information provided during the EOI process will be treated as confidential and used solely for the purpose of evaluating submissions and thereby enabling OIL to prepare a final Scope of Work for OIL's upcoming open tender for supply and commissioning of diesel engine driven high-capacity pumpset for emergency water transfer application.

Please note that this invitation does not constitute a commitment to award the project or provide any form of reimbursement for costs incurred during the preparation of the EOI.

N.B.: For any clarifications or queries, please feel free to contact us at saurav.medhi@oilindia.in/dj_sonowal@oilindia.in. We look forward to receiving your Expression of Interest and exploring the potential of working together on this project.