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Initial Responses to Pre-Bid Queries

Sub: GeM Bid No. **GEM/2026/B/7909830** dated 12.08.2026 – “Hiring of services for implementation of a comprehensive Asset Lifecycle Management solution (including installation and commissioning of sensors in rotary equipment for data gathering for AI-based predictive maintenance) designed to manage physical assets of OIL throughout their entire lifecycle from planning, procurement, deployment, maintenance, & decommissioning”.

This is to notify that **OIL's initial responses to the pre-bid queries** received within the stipulated deadline or raised during the Pre-bid meeting held on 31.08.2026 in connection with the subject tender are enclosed herewith as **ANNEXURE-I**.

Details can be viewed at www.oil-india.com.

Sd/-
(K. P. Borah)
Manager – Contracts
For Chief General Manager – Contracts

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

<u>BIDDER-A</u>				
Sl No.	Document	Tender Clause /Reference	Query	OIL's Response
1	BEC	Section: General / Bid Timeline Bid Closing Date: 10-09-2026, 14:00 Hrs (Bid Document, Forwarding Letter, Item vii). Bidders are advised to submit within the original Bid Closing Date; requests for extension shall not normally be entertained except at OIL's discretion in exceptional/unavoidable circumstances (ITB Clause 19.0).	Sudhi Advisory brings deep, globally-proven Oil & Gas domain expertise, with technology solutions validated by leading Oil & Gas operators across the Western Hemisphere in AI/ML-enabled predictive maintenance and Asset Lifecycle Management. Given the scope and technical complexity of this tender - spanning sensorization design, SCADA/Historian integration, AI/ML model development, and a 6-year implementation and AMC structure - and considering the additional lead time required for (a) assembling Joint Venture/Consortium documentation including notarized MoUs and Board Resolutions, and (b) completing mandatory Third-Party Inspection Agency verification of technical and financial documents under BEC Clause 11.0, would OIL consider extending the Bid Closing Date by a reasonable period (e.g., 2-3 weeks) beyond the current 10-09-2026 deadline? We believe additional preparation time would enable a wider pool of technically qualified bidders - including those bringing international Oil & Gas domain expertise - to prepare comprehensive, fully compliant submissions, supporting OIL's objective of maximizing competitive participation and receiving the most technically and commercially advantageous offers.	The bid closing date shall remain as notified on the GeM portal. Any change, if approved by OIL, will be communicated through the GeM portal / corrigendum.
2	BEC	BEC Clause 3.1.2(IV) - Bid from Consortium of Companies In case of Consortium bidding, the collective experience of consortium members shall have to meet the experience criteria as per Clause 3.1 of BEC; the Consortium Member on whose experience/strength the Consortium is bidding is bound to execute the full/related part of the contract falling under that experience.	For a Consortium bid where the qualifying member's experience is in AI/ML-based industrial analytics and asset performance/predictive maintenance solutions but the sensor procurement, installation, and commissioning is executed by a different consortium member, is this considered a valid scope-split under the Consortium provisions, or would it be treated as disqualifying 'technical collaboration' under Clause 3.1.2 Notes?	Shall be reviewed

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3	BEC	BEC Clause 3.1.1, Note (v) "Similar Job executed through sub-contracting shall not be considered for evaluation."	Could OIL kindly clarify the precise distinction between (a) a disqualified sub-contracting arrangement and (b) a valid Consortium/JV arrangement where each member independently holds and submits their own experience credentials under a notarized MoU? Specifically, does the exclusion apply to the bidding entity's method of qualification, or does it also restrict how the awarded contract may subsequently be executed/resourced?	Similar Job executed through sub-contracting shall not be considered for evaluation. The tender condition will prevail.
4	BEC	BEC Clause 3.1, Note (A) - Definition of Similar Works Similar Works means ALM/APM/EAM-enablement project involving installation and commissioning of sensors in rotary equipment for AI-based Predictive Maintenance covering (i) Historian/SCADA ingestion via OPC-UA/MQTT/Modbus/PI, (ii) WO auto-trigger to CMMS/ERP, (iii) demonstrated MTBF/MTTR improvement outcomes.	Would a bidder/consortium member's experience be considered compliant if items (i) sensorization/Historian-SCADA acquisition and (ii) AI/ML-based predictive maintenance analytics with demonstrated MTBF/MTTR outcomes were executed as two distinct, separately contracted projects for the same end client, rather than as a single combined contract? If so, would both projects need to individually meet the minimum value thresholds under Clause 3.1(a)/(b)/(c), or would their combined value be considered?	BEC Clause No. 3.1 along with the Similar Works definition shall be reviewed.
5	BEC	BEC Clause 3.1 - Experience Criteria (industry scope) "The bidder must have successfully executed/completed similar Works in the Oil & Gas industry in India or abroad over the last 7 (seven) years..."	Please confirm whether experience gained on Asset Performance Management (APM) or Enterprise Asset Management (EAM) implementation projects in industries outside Oil & Gas (e.g., steel, power, manufacturing, chemicals) - where the technical scope (sensorization, SCADA/Historian ingestion, CMMS/ERP integration, predictive maintenance analytics) is otherwise identical - would be considered 'Similar Work' under Clause 3.1, given the clause references 'Oil & Gas industry in India or abroad.'	BEC Clause No. 3.1 is under review
6	BEC	BEC Clause 3.1.4 - Experience executed outside India If any bidder (individual/Parent/Subsidiary/Sister-Subsidiary/Co-Subsidiary/Joint Venture/Consortium) provides documents of jobs/contracts executed outside India against BEC Clause 3.1, OIL reserves the right to ask the bidder to get such documents endorsed by the Indian Embassy of the country where the job/contract was executed.	Given that global Oil & Gas operators in North America and other Western Hemisphere markets have extensively deployed AI/ML-based predictive maintenance and Asset Lifecycle Management solutions over the past decade, could OIL confirm that 'similar work' experience executed for international Oil & Gas operators (outside India) is evaluated on an equal footing with domestic experience, subject to the currency conversion and Embassy-endorsement provisions already stipulated in Clause 3.1.4?	Shall be reviewed

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7	BEC	BEC Clause 3.1.2(IV) - Constitution of Consortium / Leader Only the Leader of the consortium should register against the tender in GeM portal and submit bid on behalf of the Consortium. The leader must confirm unconditional acceptance of full responsibility for executing the Scope of Work.	Could OIL clarify whether a Consortium member providing the core AI/ML software platform and analytics capability (without providing instrumentation hardware) may be designated as the Consortium Leader, provided a hardware-and-installation-capable member is included as a co-member meeting the relevant OEM authorization requirements under Clause 3.2?	Please be guided by the Consortium Clause 3.1.2 (IV) of the BEC for clarification against the said query.
8	BEC	BEC Clause 3.1.2(IV) - Consortium MoU The MoU must clearly define the role/scope of work of each partner/member and should clearly define the leader of the consortium.	For Consortium bids, is there a minimum equity/revenue-share contribution required from each member proportional to their share of the scope of work, or is this left entirely to the Consortium MoU?	There is no minimum equity/revenue-share contribution required from each member proportional to their share of the scope of work. Please be guided by the Consortium Clause 3.1.2 (IV) of the BEC for more details.
9	BEC	BEC Clause 3.2 - Manufacturer Authorization Form (MAF) The Bidder shall be authorised by the OEMs of the hardware instruments used during implementation: (i) Wireless Magnetic Vibration Sensors, (ii) Wireless Pressure Transmitters, (iii) Wireless Temperature Transmitters (Proforma-XXXIII).	Can the bidder submit MAFs from multiple OEMs for different instrument types, or is a single-OEM authorization expected across all three categories?	Shall be reviewed
10	Price Bid Format	Price Bid Format, Section H - Infrastructure, Line Item 300 "Cloud Subscription (MeitY empanelled) incl. routing via OIL Azure landing zone & SSO" - Per Year.	Could OIL confirm whether the Azure landing zone and tenant will be provisioned and owned by OIL, with the bidder responsible only for configuration/integration, or whether the bidder is expected to provision and host the cloud environment under its own subscription?	Shall be reviewed

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11	SOW	Scope of Work / Technical Specifications - Deployment & Infrastructure Deployment Infrastructure: As per tender requirement. Security Audit/Certification: As per tender requirement.	Could OIL clarify the expected data residency requirements for the ALM platform and underlying Historian/SCADA data - specifically, whether all data must be hosted within India, and whether any AI/ML model training or inference may occur on infrastructure located outside India?	All ALM, historian and associated project data functions and processing shall remain within India using a MeitY-empanelled public cloud with Indian data residency. Accordingly, AI/ML model training and inference involving OIL data shall also be performed only on infrastructure located within India. Processing or transfer of OIL data outside India is not permitted.
12	Price Bid	Price Bid Format, Section B - Annexure-B (Assets List) "Asset Lifecycle Management (ALM) Software for (Assets provided in Annexure-B)" - Lumpsum.	Could OIL share the total count and site distribution of rotary equipment (pumps, compressors, motors) to be instrumented, to allow accurate BOQ pricing for Sections C and D?	1. All equipments mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
13	Payment Terms	Payment Terms, Section B - Milestone Payments for ALM Solution Milestone payments expressed as "% of total Implementation Charge quoted in the Price Bidding Format except Section C, D & G of PART-I as per BOQ."	Could OIL confirm which BOQ sections comprise 'Implementation Charge' for this calculation - specifically, whether Sections A, B, E, F, and H are all included in this base?	For milestone-payment calculations, "Implementation Charge" covers the applicable Part-I sections excluding Sections C, D and G. Accordingly, the relevant base comprises Sections A, B, E and F. Section H belongs to Part-II and is not included.

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14	Payment Terms	Payment Terms, Important Note 5 "The total quoted price for 5 years towards AMC under Section-J of PART-II shall not be less than 20% of the total OFFER PRICE."	Could OIL clarify whether the 20% minimum AMC threshold is computed against the Grand Total (Part I + Part II) or against Part I (Implementation Cost) alone?	The 20% minimum AMC threshold shall be calculated on the total Offer Price including GST. If the five-year AMC price is below 20%, the differential amount will be withheld proportionately from eligible invoices and released after successful contract completion, subject to satisfactory performance.
15	BEC	ITB Clause 27.0 / BEC 4.3 - Performance Security for JV/Consortium Performance Security to be submitted within 30 days of LOA in favour of Oil India Limited, payable at Duliajan. For Consortium bids, Bid Security and Performance Security shall be in the name of the Leader on behalf of the Consortium.	For Consortium/JV bids, will the Performance Security and EMD instruments accepted from a Consortium Leader registered outside the bidder's home state require any additional stamping or registration formalities specific to Assam, given the Beneficiary is OIL Duliajan?	Bid Security and Performance Security shall be issued in the name of the Consortium Leader on behalf of the consortium, specifically referencing the consortium bid and members. Applicable stamp-duty and execution requirements shall be complied with at the place of execution/submission. The tender does not prescribe an additional Assam-specific registration requirement.
16	SOW	Introduction/Forwarding Letter, Item xvii - Pre-Bid Conference Pre-Bid Conference tentatively scheduled on 31-08-2026 at OIL's Corporate Office, Noida; may also be conducted through Video Conferencing (VC), if considered appropriate.	Could OIL confirm whether Video Conferencing attendance will be permitted for the Pre-Bid Conference for bidders/consortium representatives based outside India, and if so, the process to register for VC access?	No

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17	BEC	3.0 TECHNICAL EVALUATION CRITERIA: The bidder must have successfully executed/completed similar Works in the Oil & Gas industry in India or abroad over the last 7 (seven) years reckoned from the Original Bid Closing Date	We request the Authority to kindly consider similar works executed for Government Departments, PSUs, Autonomous Bodies, Statutory Bodies, or other reputed organizations, irrespective of the industry/sector, provided the scope involves design, development, implementation, integration, customization and/or maintenance of IT applications, ERP, web/mobile applications or similar IT solutions. Restricting the experience exclusively to the Oil & Gas industry may limit competition and exclude technically capable IT/system integration companies having substantial experience in delivering similar projects for Government/PSU organizations. Hence, we request that Oil & Gas industry experience may be considered as preferred rather than mandatory, or alternatively, experience in any Government/PSU/large enterprise sector may also be accepted.	Shall be reviewed
18	BEC	Notes to BEC Clause No. 3.1: A. Similar works shall mean: “ALM (Asset Lifecycle management) / APM / EAM-enablement (or related) solution” as defined below - Project involving installation and commissioning of sensors in rotary equipment (such as pumps, compressors, motors etc.) for AI-based Predictive Maintenance through data acquisition covering (i) Historian/SCADA ingestion (with industrial protocols such as OPC-UA/MQTT/Modbus/PI. (ii) WO auto- trigger to CMMS/ERP. (iii) Show outcomes (e.g., MTBF/MTTR improvement).”	Kindly change amend the criteria as: We request the Authority to kindly broaden the definition of “Similar Works” to include projects involving Intelligent Traffic Management System (ITMS)/ Integrated Command & Control Centre (ICCC)/ CCTV/video surveillance, sensor-based monitoring, real-time data acquisition, analytics/ AI/ML-based solutions/ GIS-based monitoring/ IoT platform integration, system integration, dashboard development and integration with enterprise applications. Such projects involve similar capabilities relating to real-time data acquisition, processing, monitoring, analytics, alerts, dashboarding, integration and centralized management. Accordingly, experience in ITMS / Intelligent Transportation Solutions/ IoT-based monitoring solutions/ CCTV & Video Management Systems/ Command & Control Centres/ SCADA/IoT integration/ GIS-based applications/ ERP/CMMS integration and other real-time monitoring and analytics platforms may also be considered as “Similar Works”.	Shall be reviewed
19	General	Tender Detail Pre-Bid Date: 31.08.2026 Location: OIL’s Corporate Office, Noida Time: 10:00 AM IST	As we have key stakeholders located in USA and India, is it possible to provide virtual attendance? If yes, please provide the virtual meeting details. If nor may we request to include virtual attendees?	No

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<u>BIDDER-B</u>				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	BEC	Bid Ref No.: GEM/2026/B/7909830 & Bid End Date: 10/9/2026 2:00:00 PM "Notice Inviting Expression of Interest (EOI) for Artificial intelligence, Machine Learning, and Deep Learning as a Service - Development; Hiring of services for implementation of a comprehensive Asset Lifecycle Management solution; As per tender requirement; As per tender requirement; As per Service 6 Years." We are mentioning query under GFR 2017, Rule 173(i). Please release a corrigendum for MSME Prior Experience relaxation. •GFR 2017, Rule 173(i) permits procuring entities to relax prior turnover and prior experience conditions for Startups and MSEs, subject to the bidder meeting quality and technical specifications. •Public Procurement Policy for MSEs Order, 2012 (DPIIT/MSME Ministry) applies to CPSEs — ITI Limited is a CPSE under DoT. •Separately, "5 projects with ITI Limited specifically" is a restrictive condition on its own merits. Prior experience with the same buyer as a qualification bar tends to attract scrutiny under CVC guidance on restrictive tender conditions, since it excludes otherwise capable vendors and narrows competition. This is worth raising regardless of your MSME status	We are requesting for relaxation of clause 4(i)c (prior experience) under GFR Rule 173(i) / PPP-MSE 2012, citing your registration number	Relaxation/Exemptions in prior turnover and prior experience conditions for Startups and MSEs is not applicable for this tender. The tender condition prevails.

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<u>BIDDER-C</u>				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	SOW	OIL is also implementing a GIS based Asset Management Information System (AMIS) which will include increased asset visibility, improved asset utilization, reduced maintenance costs, and improved compliance with regulations and standards. AMIS will provide a unified platform to provide easy accessibility to essential information for critical assets and locations. This includes high value assets, crucial surface data like layouts of drilled wells and the potential number of wells that can be drilled from a plinth, shape files of cultural data, district boundaries, satellite images, and revenue circles.	• What GIS platform (if any) does OIL currently operate, and is this AMIS meant to run on that platform or Will require a new one? • What is the current source and format of the "shape files of cultural data, district boundaries" — are these already in a structured enterprise geodatabase, or raw shapefiles requiring migration/cleanup? • Is there an existing EAM/CMMS system in production (e.g., SAP PM) that this GIS-based AMIS must integrate ? • Approximately how many users are expected to access this system?	No new GIS platform is required. The ALM solution need to be able to integrate for the requisit GIS referencing of mapped assets in the AMIS.
2	SOW	GIS operations should be able to specify a portion of a linear asset and execute a search in GIS based on the portion and not the entire asset	Could you clarify where linear asset data is currently stored, and what future plans exist for these assets beyond basic location intelligence?	Linear-asset master data shall be sourced from SAP S/4HANA and AMIS. Detailed source data, interfaces and future workflows shall be finalized during requirement gathering.
3	SOW	Solution should be able to fully integrate with GIS module which can: • Locate equipment on a map • View all equipment within an equipment hierarchy on a map • Create a work order and activity for a piece of equipment based on its geographic location • Create sequential routes for equipment based on geographic location • Pre-map asset attributes and assign an information owner in GIS. • The GIS Solution should also analyze geo-spatial data against tabular equipment work data provided by AM. This means that both GIS and AM search criteria to be entered on a single screen and execute the search to disclose a list of equipment and highlight the equipment on the associated GIS map	• Will GIS serve as the backbone/system of record for this integration, or will the workflows be executed within the GIS platform itself? • Approximately how many users will need access to this integrated GIS-AM workflow?	The ALM solution need to be able to integrate for the requisit GIS referencing of mapped assets in the AMIS. At present all equipments of OIL are not mapped in the AMIS as the project is still in the implementation stage .But the ALM solution need to be capable of the needful integration for all the equipments that get included in the AMIS.

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4	SOW	Mobile Work Execution The mobile solution should enable users to: (i) View GIS maps on the device (ii) Create work requests and work orders (iii) Raise and approve work permits (iv) Approve or reject workflows (v) Enter meter readings for assigned equipment with auto-populated meter name and unit of measure	Is a custom mobile application required for these workflows, or can Esri's existing field mobility applications (e.g., Field Maps) fulfill these requirements?	The Mobile Solution to be capable as per the stated requirement irrespective of being a custom or existing application.
5	SOW	4 Integration: (i) Integrate IoT, sensors & Historian (PI/SCADA/Edge) (ii) Map real-time utilisation & condition monitoring (iii) Configure health score algorithm (iv) Create visual hierarchy / GIS (v) Develop state-change tracking (vi) Integrate HACM program for static equipment (vii) Enable predictive maintenance sensor streams	Is this integration expected to be handled through GIS? If so, should it be implemented as a real-time data stream or an API-based integration?	The ALM solution need to be able to integrate for the requisit GIS referencing of mapped assets in the AMIS. At present all equipments of OIL are not mapped in the AMIS as the project is still in the implementation stage. But the ALM solution need to be capable of the needful integration for all the equipments that get included in the AMIS.
6	SOW	Web & Mobile Browser Application SOW 3.1; Section 4.0 - Mobility; Technical Requirement 5.0 Web-based ALM platform and native mobile functionality with online/offline operation, work-order execution, inspections, asset/equipment and materials management, GIS access, configurable workflows and bi-directional synchronization.	Is there a specific requirement for this functionality to be delivered through GIS, given that similar capabilities are already available through Esri's field workflow applications?	The Mobile Solution to be capable as per the stated requirement irrespective of being a custom or existing application.

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<u>BIDDER-D</u>				
SI No.	Document	Tender Clause/Reference	Query	OIL's Response
1	SOW	4.5 SAP S/4 HANA	Does SAP support REST API for integration? Which authentication mechanism is supported?	SAP side end to end delivery of the integration solution shall be done by the bidder. OIL will facilitate in giving access to SAP S/4HANA Private Cloud development and test environments, subject to internal access control policies. Authentication Mechanism to be finalized during detailed engineering / design phase
2	SOW	4.4 Data Source	Is the process data available in site historian? Or solution must fetch the process data from DCS/Scada? Existing Scada systems support OPC-DA/OPC-HDA interfaces?	Nothing will go to OT data lake bypassing SCADA, any data going to OT data lake has to pass cybersecurity layer of OIL. Historian is there in other initiatives but this initiative will have its own historian. ALM package will be in Cloud and rest OT data will be in On-Prem OT data lake
3	SOW	5.1 (x) Sensor data shall be fetched from OT Data Lake, and the digital solution shall be deployable as SaaS solution.	Provide details on the OT data lake? Which interfaces are available to read the sensor data from data lake? Will data lake store vibration FFT data in it? If read, in what format will it be made available	Wherever SCADA RTU is available, bidder has to connect through wired sensors; Wireless sensors to be used wherever SCADA RTU is not available & in such cases data to be transmitted through GSM to SCADA MCS
4	SOW	General User Names	How many named & concurrent users for ALM solution?	The named/concurrent-user split will be finalized during requirement finalization, while organization-wide licensing for OIL shall be included.
5	SOW	5.11 Cyber Security	Does the cyber security architecture depict the exact site network topology along with switches & firewalls? Or site network topology is any different?	Site network topology will be same
6	SOW	10 Data Classification	Please provide OIL's Data Classification & Protection Policy	To be shared post LoA award
7	SOW	EC/PQC Clause 3.1 – Definition of Similar Work Definition of Similar Work	We understand that the objective of the qualification requirement is to establish the bidder's experience in delivering Asset Lifecycle Management (ALM), Asset Performance Management (APM), EAM-enablement, Predictive Maintenance, Condition Monitoring, and integration with	The similar work definition will be reviewed

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			enterprise maintenance systems. In many operating facilities, predictive maintenance and asset performance management solutions are implemented using existing plant instrumentation, DCS/SCADA systems, historians, condition monitoring systems, OEM equipment data, industrial IoT data sources, and other operational data acquisition methods without requiring deployment of new field sensors as part of the project scope. Accordingly, we request consideration of projects involving Similar Work, "Supply, engineering, implementation involving installation and commissioning of ALM/APM/EAM-enablement for AI/ML-based Predictive Maintenance solution through data acquisition covering" (i) Historian/SCADA ingestion (with industrial protocols such as OPC-UA/MQTT/Modbus/PI. (ii) WO auto-trigger to CMMS/ERP. (iii) Show outcomes (e.g., MTBF/MTTR improvement)."	
8	SOW	Section-V: Payment Terms A. PART-I 'IMPLEMENTATION PHASE' a. Instrumentation & Communication Packages for ALM solution- 1. Hardware Supply:70% after supply and receipt of materials at site. 2. Installation & Commissioning Charges:100% after completion of installation and commissioning 3. Hardware Final Payment:30% after SAT/Go-Live.:15% after SAT/Go-Live/Completion Certificate from OIL 4. Training:100% of the value as per BOQ against user training and handover	Kindly accept below proposed Payment Terms 1. Hardware Supply:85% on Hardware FAT completion, delivery at site, and submission of documents. 2. Installation & Commissioning Charges:80% after installation completion 20% after SAT/Go-Live/Completion Certificate from OIL 3. Hardware Final Payment:15% after installation completion:15% after SAT/Go-Live/Completion Certificate from OIL 4. Training:100% of the value as per BOQ against user training and handover	No change in Payment terms
9	SOW	Section-V: Payment Terms A. PART-I 'IMPLEMENTATION PHASE' b. Milestone Payments for ALM solution-- 1. Kick-off & Mobilization:1% of Implementation Charges after kickoff and mobilization. 2. Requirement Finalization & Design: 15% of implementation charges. 3. Configuration & Analytics Development:32% of implementation charges. 4. UAT/SAT & Go-Live.:32% of implementation charges. 5. Stabilization & Handover:20% of implementation charges.	Kindly accept below proposed Payment Terms 1. Kick-off & Mobilization:10% of Implementation Charges upon contract signing, submission of PBG and mobilization. 2. Requirement Finalization & Design: 15% of implementation charges. 3. Configuration & Analytics Development:32% of implementation charges. Billing allowed on completion of configuration milestone and submission of UAT environment 4. UAT/SAT & Go-Live.:28% of implementation charges. 5. Stabilization & Handover:15% of implementation charges.	No change in Payment terms

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10	SOW	Section-V: Payment Terms B. PART-II ' POST IMPLEMENTATION PHASE' a. Infrastructure 1.SaaS Subscription: Quarterly payment after invoice submission. 2.Cloud Subscription: Quarterly payment basis.	Kindly accept below proposed Payment Terms 1.SaaS Subscription: Quarterly payment in advance. 2.2.Cloud Subscription: Annual advance or Quarterly advance.	No change in Payment terms
11	SOW	Section-V: Payment Terms B. PART-II ' POST IMPLEMENTATION PHASE' b. MAINTENANCE & SUPPORT PHASE 1.AMC Payment: Quarterly in arrears after completion of quarter	Kindly accept below proposed Payment Terms 1.AMC Payment: Quarterly in advance or at start of quarter.	No change in Payment terms
12	SOW	18.2 Hardware Bill of Quantity: Sensor and Transmitter Qty	Pls confirm the sensor and transmitter qty to considered as Page No 241 , Price Schedule having variation in quantity for sensor and transmitters	The quantity of sensors and transmitters will be reviewed
13	SOW	18.2 Hardware Bill of Quantity: Sensor and Transmitter Qty- Wireless Vibration Sensor	Kindly provide total area spread along with layout in each location towards 500 Nos sensors to be installed and also need to know the time duration for the same.	Contractor to assess the same during Site Visit
14	SOW	18.2 Hardware Bill of Quantity: Sensor and Transmitter Qty- Wireless Pressure and Temperature Tx	Kindly provide total area spread in each location towards transmitter to be installed along with layout details and also need to know the time duration for the same.	Contractor to assess the same during Site Visit
15	SOW	Annexure B: Equipment to be considered for ALM Asset Count for ALM	We understand overall asset count is 472 number as per Annexure-B. Out of which 110 Assets are considered for sensorization with sensor count of 500 pls confirm	Source of equipment quantity will be as per SAP data. 1. All equipments mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
16	SOW	16.6 The Bidder shall procure all Instruments & Sensors only from OEMs approved by the OIL prior to procurement.	Kindly share the approved make for all instrument and sensors.	Under review, and if required the list of OEM to be provided

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17	SOW	General Cloud SSO / Active Directory Federation	Assuming the solution is hosted in Meity approved public cloud, will OIL provide access to their on-prem or cloud (azure) Active Directory for federation to enable SSO functionality.	Shall be reviewed
18	SOW	General Site & Unit Count / Geographic Distribution	How many units to be considered at each location, what is the approximately geographical distance between the units	Equipment details are provided in the annexures; exact locations and distances shall be validated during field survey.
19	SOW	General Network Segmentation / Purdue Architecture	Does each location has network segregation like L2, L3, L3.5 or is it expected to be done as part of the project	The tender specifies the required high-level cybersecurity architecture. Existing site-wise L2/L3/L3.5 segmentation has not been detailed. The bidder shall assess the existing network and provide bidder-side gateways, security and connectivity components required for compliance.
20	SOW	General Source Systems & Interface Protocols	Please clarify location wide & unit wide source systems & available interface protocols	Applicable source systems include SAP S/4HANA, SCADA/DCS/PLC, condition-monitoring systems, historian, OT Data Lake & AMIS/GIS. Supported protocols include OPC-UA, MQTT, Modbus-TCP, HART, Foundation Fieldbus, Serial and TCP/IP. Location-wise systems and available interfaces will be confirmed during design.
21	SOW	General Historian Tag Distribution by Location	out of 50000 tags what is segregation of tags among each location	During design phase
22	SOW	General Historian Deployment Architecture / Central Visualization	does each location requires it's own historian for process data ? And visualization of it or all the site level users will connect to central location only for visualization of data	One central historian for ALM
23	SOW	General Historian Process Graphics	does any process graphics required as part of the visualization from historian ? What is the total number of graphics to be considered	During design phase
24	SOW	General Historian Reports	is it expected any reports generation of process data from the historian ? What is the total number of reports to be considered ?	During design phase
25	SOW	General High-Frequency Vibration Data Historization	Vibration monitoring data are very high frequency data, is it really expected to be historized in historian ?	Yes. The solution shall support storage and analysis of vibration parameters, FFT outputs, spectra, waveforms and trends. Detailed storage strategy, including raw-data retention, derived parameters and sampling/publishing frequency, shall be finalized during design.
26	SOW	General Existing Site Network Architecture	please provide existing network architecture of each location	Will be shared with the successful bidder during design, subject to cybersecurity and access controls.

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27	SOW	General SCADA OPC Connectivity	is the site level SCADA systems enabled with OPC protocol ?	Not required
28	SOW	General SCADA OEM Point Configuration	since the SCADA server are from different OEMs i.e. ABB & Yokogawa, is it possible customer to carry out additional points configuration with respective OEM	OIL will facilitate access and coordination with ABB/Yokogawa. The bidder shall coordinate and ensure the necessary tag additions, engineering and integration required for accommodating ALM sensor data.
29	SOW	General Additional SCADA / PLC Requirement	for the instruments where SCADA or PLCs are not available, is it expected to supply such control systems as part of this project ?	A new SCADA system is not envisaged. At locations without SCADA connectivity, sensor data shall be transmitted through M2M SIM, Private APN and MPLS connectivity to the SCADA Master Control Station, followed by the OT Data Lake and ALM platform. Required controllers/gateways and field-side components are within bidder scope.
30	SOW	General Historical Data Volume & Sampling Frequency	What is the volume of historical data available, years of historical data/ sampling frequency	Historical-data volume, period and sampling frequency will be assessed during discovery; the bidder shall cleanse and prepare the available data for model development.
31	SOW	General SCADA Capacity & OEM Coordination	The tender requires the bidder to coordinate with the existing ABB or Yokogawa SCADA OEM if SCADA capacity is insufficient. Kindly confirm:	1. OIL will facilitate engagement with ABB/Yokogawa and provide controlled access to available SCADA information. 2. Bidder shall include OEM coordination, engineering, connectors, licences, RTU/tag configuration and other modifications required for successful ALM sensor integration. 3. Existing architecture, channel capacity, communication licences and approved interface specifications available with OIL will be shared during detailed engineering.
32	SOW	General OEM Engagement & System Access	1. Whether OIL will facilitate the required OEM engagement and system access.	
33	SOW	General OEM Engineering, Licenses & RTU Modifications	2. Whether OEM engineering, licenses, RTU modifications and tag additions are included in bidder scope.	
34	SOW	General SCADA Architecture, Channel Capacity & Interfaces	3. Whether OIL will provide existing architecture, available channel capacity, communication licenses and approved interface specifications.	
35	SOW	General AI Model Acceptance for Limited Failure History	For new sensors or assets with insufficient labelled failure history, please confirm whether initial model acceptance can be based on successful sensor validation, engineering-rule models, first-principles models and anomaly detection. Kindly define the minimum data-sufficiency threshold and whether supervised prediction accuracy will be assessed only after adequate operating and failure data has accumulated.	A bidder has to provide test cases for all the possible failure scenarios. Successful passing of all these test cases will be an acceptance criteria

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

36	SOW	General Historian 50,000-Tag Scope	Please confirm whether the 50,000-tag capacity shall cover only the new tags created under the ALM project, including the supplied wireless instruments, or whether it shall also include existing tags retrieved from SCADA, DCS, PLC, PI/OSIsoft historian, OT Data Lake and other source systems for model development and contextual analytics.	50,000 tag capacity shall cover only the new tags created under ALM project
37	SOW	General Historian Data Retention	Please specify the required online and archive retention periods for the 50,000 historian tags, including retention requirements for raw values, compressed values and calculated tags.	Online & archive retention period of 1 year
38	SOW	General Historian Capacity Growth & Scalability	Kindly confirm whether 50,000 tags represents the initial requirement or the maximum required capacity during the five-year contract. Please provide the expected annual tag-growth assumption and clarify whether expansion beyond 50,000 tags during the contract shall be treated as additional scope or must be included within the quoted price.	50,000 tags represents the maximum required capacity during the five-year contract
39	SOW	General Calculated / Derived Tag Licensing	Whether calculated, derived, soft-sensor, diagnostic, asset-health, fault, RUL and other model-output tags consume the entitlement.	Calculated, derived, soft-sensor, diagnostic, asset-health, fault and RUL tags shall be considered within the 50,000-tag entitlement
40	SOW	General Vibration Sensor Installation Acceptance	Kindly define the installation acceptance criteria for vibration sensors, including permitted surface preparation, mounting-pad requirements, maximum surface roughness/curvature, orientation marking, mounting resonance verification and baseline signal-quality validation. Please confirm whether removal of paint/coating and preparation of a flat mounting surface on the bearing housing are permitted, subject to OIL approval.	Installation shall follow sensor-OEM guidelines, plant-safety requirements and approved detailed engineering. Adhesive, magnetic, screw and epoxy mounting are permitted options. Surface preparation, coating removal, orientation, mounting resonance and baseline signal-quality checks shall be finalized through the site feasibility assessment and require prior OIL approval.
41	SOW	General Rotary Equipment OEM Approval for Sensor Mounting	For sensors to be installed on existing pumps, compressors, turbines, engines and drilling equipment, kindly confirm whether equipment-OEM approval is required for drilling, tapping, stud mounting, adhesive/epoxy mounting or removal of local coating. Where such approval is required, please confirm whether OIL will facilitate approval from the respective equipment OEM and provide available equipment drawings and OEM installation restrictions.	Drilling, tapping, stud mounting, adhesive/epoxy mounting or coating removal shall be undertaken only after site feasibility assessment and prior approval from OIL and, where required, the equipment OEM. OIL will facilitate coordination and provide available drawings and OEM restrictions. The bidder shall obtain and comply with the necessary installation recommendations.
42	SOW	General Edge Gateway Indoor / Outdoor Classification	Kindly provide the proposed installation location and environmental classification for each of the 15 edge gateways, including:	Indoor/outdoor status, hazardous-area classification, power source, sensor distance, mounting arrangement, earthing/lightning protection and network availability will be established during the field survey and detailed
43	SOW	General Edge Gateway Hazardous Area Classification	a) Indoor or outdoor installation.	

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44	SOW	General Edge Gateway Power Supply	b) Hazardous or non-hazardous area.	
45	SOW	General Sensor-to-Gateway Distance	c) Available power-supply voltage and source.	
46	SOW	General Gateway Panel / Shelter / Rack Availability	d) Distance from proposed sensors.	
47	SOW	General Earthing & Lightning Protection	e) Available panel, shelter, rack or mounting structure.	
48	SOW	General Cellular / Network Signal Availability	f) Available earthing and lightning protection.	
49	SOW	General Gateway Auxiliary Infrastructure Scope	g) Cellular/network signal availability.	
50	SOW	General Panels, UPS, Antenna Masts & Civil Works	Please confirm whether new panels, shelters, UPS, power supplies, antenna masts and civil foundations are required.	The bidder shall provide all panels/enclosures, power supplies, cabling, antenna arrangements, mounting structures, foundations and related works required for a complete installation. Existing panel power may be used where available. Final requirements will be determined during field survey and detailed engineering.
51	SOW	General AI-PdM Historical Data Availability	The AI-PdM solution requires historical time-series extraction, separate training and evaluation periods, maintenance-order history, failure codes, maintenance actions, replacement records and downtime logs. Honeywell assumes that these data's are available with OIL	Wherever available historical time-series, maintenance orders, failure codes, maintenance actions, replacement records and downtime logs will be shared during discovery considering OIL is implementing ALM & CBM for the first time.
52	SOW	General AI Model UAT / Go-Live Acceptance Criteria	The tender requires the COTS solution to provide early-failure warning even in the absence of historical asset failures. It also requires fault classification, RUL prediction, model self-assessment and defined accuracy performance. For assets having inadequate or no validated historical failure events, kindly confirm the model-acceptance basis at UAT/Go-Live. Specifically, please confirm whether acceptance may be based on: a) Normal-behavior baseline and anomaly-detection validation. b) Engineering-rule and first-principles model validation. c) Simulation or replay of known fault signatures. d) OEM curves and operating-limit validation. e) Functional demonstration of the model workflow and alerts. Please clarify when statistically measured fault-classification and RUL accuracy will become applicable after sufficient validated operating and failure data is accumulated.	For assets lacking validated failure history, initial acceptance may be based on baseline/anomaly validation, engineering-rule and first-principles models, simulated/replayed fault signatures, OEM curves and functional demonstration of alerts and workflows. Statistical fault-classification and RUL accuracy shall apply after sufficient validated data becomes available, based on agreed UAT criteria.

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53	SOW	General FMEA / Fault Signature Library & Approval	The solution must contain equipment-specific failure modes, symptoms, thresholds, mitigation steps and a reusable fault-signature library. Kindly confirm whether OIL will provide its approved FMEA/FMECA, failure-mode catalogue, alarm/trip limits and known fault signatures for the Annexure A equipment, or whether the bidder is required to develop this engineering content from OEM manuals, operating history and workshops. Please define the required approval authority for each new or modified fault signature before deployment in production.	For equipments under Annexure A & Annexure B, OIL will provide available FMEA/FMECA studies, alarm limits, operating history and OEM documentation, wherever available. The bidder shall develop and configure missing failure modes, symptoms, thresholds, mitigation actions and fault signatures. New or modified signatures shall be technically validated with OIL's nominated Maintenance/Reliability/Operations representatives before production deployment.
54	SOW	General Gas Composition	Is Gas composition data being monitored and historized (Online)?	Gas composition data is monitored and available online
55	SOW	General Reports and Dashboard	Will it be possible to get the details and count of the custom Reports and Dashboards (role based - executive/ operational) as part of the Reporting and Analytics function?	The bidder shall configure all dashboards, reports, KPIs and visualizations required to meet the SOW. The detailed role-wise inventory, layouts, thresholds and priorities will be finalized during requirement finalization without additional commercial impact for the tendered scope.
56	SOW	General Expected User	Number of expected users by role - Reliability, Maintenance, operations. Required for work order solution and access.	The solution shall support approximately 200 active users. The role-wise allocation across Reliability, Maintenance, Operations, Management and Administration, along with the named/concurrent-user split, will be finalized during requirement finalization.
57	SOW	General Managed Services	Expectation of Managed Services (Monitoring) post Go-Live apart from Standard AMC	Post-Go-Live services include application and infrastructure monitoring, incident and problem management, interface/batch monitoring, administration, security support, upgrades, model training for newly incorporated equipments, model monitoring/retraining, integration health, instrument maintenance and SLA reporting. These services shall be included within the AMC scope.
58	SOW	SOW 3.1.7, Annexure-A, SOW 18.2 Sensors	Annexure-A indicates approximately 110 machines and the BOQ specifies 500 vibration sensors. Kindly provide the final equipment-wise sensor quantity and measurement-point mapping for vibration, pressure, and temperature sensors.	Final allocation and mounting-point mapping will be established through field survey and detailed engineering.
59	SOW	SOW 18.2	Please confirm whether the quantities of 500 vibration sensors, 100 pressure transmitters, 100 temperature transmitters, and 10 gateways are fixed quantities or indicative quantities subject to the detailed site survey.	Shall be reviewed
60	SOW	SOW 6.1 Sensors	The vibration sensor specification refers to LoRaWAN data communication as well as 2.4 GHz Bluetooth Low Energy. Please clarify the mandatory primary communication protocol between the sensors and gateways.	Shall be reviewed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

61	SOW	SOW 6.1 Sensors	Temperature transmitters specify ISA100.11a, whereas vibration sensors appear to use LoRaWAN. Please confirm whether separate gateways are required for LoRaWAN and ISA100 devices and whether such gateways are included within the quantity of 10 edge gateways.	Shall be reviewed
62	SOW	SOW 6.1 - Vibration Sensors Sensors	The sensor specification mentions FFT comprising '36 high-energy amplitudes' and configurable 250 Hz sub-band values. Please clarify whether complete FFT spectra and raw time waveform data must also be transmitted and stored in the ALM platform.	The solution shall support complete FFT spectra, raw time waveforms and derived vibration parameters required for vibration analytics. Transmission and retention frequencies shall be optimized during detailed design considering bandwidth, storage and analytical requirements.
63	SOW	SOW 6.1 - Vibration Sensors Sensors	Please specify the required maximum frequency range, FFT resolution/number of lines, sampling rate, waveform length, and configurable measurement interval for each monitored equipment category.	Equipment-specific settings will be finalized during engineering.
64	SOW	SOW 6.2 Sensors	Please clarify whether gateways/controllers will be used only for condition monitoring or will also interface with machinery protection, alarm or trip circuits.	The primary purpose is condition monitoring and analytics
65	SOW	SOW 14.0 Sensors	Kindly provide available drawings, mounting locations, process connections, hazardous-area classifications, distances between sensors and gateways, and power-source details before finalization of the hardware design.	Bidders are advised to undertake site visits as provided in the tender. Detailed site layouts, equipment locations, hazardous-area classification and installation particulars available with OIL will be shared with the successful bidder during design/site survey
66	SOW	SOW 14.0 Sensors	Please confirm whether any existing hardware is presently installed and must be removed. If yes, kindly provide its type, quantity, locations, isolation requirements, and disposal procedure.	The tender provides for removal of existing hardware where required and transportation to an OIL-designated disposal area. The type, quantity, location and isolation requirements will be identified during field survey.
67	SOW	SOW 6.1, 8.0 and 14.0 Sensors	Please provide the site-wise hazardous-area classification, gas group, temperature class and IP protection requirement for every sensor and gateway location.	Site-wise classifications will be confirmed during field survey. The tender stipulates Gas Groups IIA/IIB minimum, T4 or better as applicable, and IP65/66 outdoor enclosure protection.
68	SOW	SOW 8.0(v) and Note under SOW 6.2 Sensors	Clause 8.0 requires hazardous-area supporting documents with the bid, while the note under SOW 6.2 requires certificates at the time of supply. Please confirm the exact documents required at the technical-bid stage.	The technical bid shall include documents identifying the protection type, applicable standard, test criteria, testing status and test reports from an Indian Government/NABL-accredited laboratory, IECEx-accredited laboratory or ATEX notified body. Copies of final equipment-specific hazardous-area compliance certificates shall also be submitted at the time of supply.
69	SOW	SOW 8.0 Sensors	Please confirm whether valid IECEx/ATEX certification from an accredited/notified body is acceptable or whether separate PESO and/or DGMS approval is mandatory before installation.	IECEx or ATEX or PESO test certification from an eligible accredited/notified body is acceptable as supporting technical evidence

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70	SOW	SOW 14.0(ii) Sensors	Pipeline cutting, civil works and installation are included in bidder scope. Kindly provide the estimated quantity and nature of hot work, pipeline modifications, fabrication, foundations and civil works required at each site.	These shall be determined during field survey and detailed engineering. The bidder shall include all necessary site works required for the tendered installation scope.
71	SOW	SOW 14.0 Sensors	Please confirm that OIL will provide shutdowns, equipment isolation, work permits, gas testing, electrical isolation and access support required for installation and commissioning.	OIL will coordinate equipment availability and facilitate applicable shutdowns, isolation, work permits, gas testing, electrical isolation and site access through its authorized teams. The bidder shall submit the necessary work plans, risk assessments and documentation and coordinate execution with OIL Operations/Electrical/Instrumentation teams.
72	SOW	SOW 6.2 Sensors	Please provide LTE signal-strength or network-availability information for all proposed sites and confirm whether OIL or the bidder will procure and pay for dual-SIM connectivity and recurring data charges.	Site-wise LTE availability will be assessed during field survey. OIL shall provide the required dual-SIM arrangement & recurring data charges to be borne by OIL
73	SOW	SOW 6.2 Sensors	Please specify the required data-buffering duration at the sensor and gateway levels during loss of LTE/cloud connectivity.	Sensors shall support the specified local data logging, including up to 20 days under the default configuration.
74	SOW	SOW 9.0 Sensors	Please confirm whether the solution must be deployed within OIL's existing Microsoft Azure environment or whether another MeitY-empaneled public cloud may be proposed and connected through OIL's Azure landing zone.	Shall be reviewed
75	SOW	SOW 9.0 Sensors	Kindly provide the expected number of users, concurrent users, data-retention period, backup frequency, disaster-recovery RPO/RTO, storage volume and annual data-growth assumptions for cloud sizing.	Shall be reviewed
76	SOW	SOW 9.0, cybersecurity requirements Sensors	Please provide OIL's detailed cybersecurity architecture, onboarding checklist, VAPT requirements, SOC/SIEM integration requirements, IP whitelisting procedure and responsibility matrix for firewalls, VPNs and security gateways.	The solution shall comply with the cyber-security architecture and controls specified in the SOW, including secure connectivity, SSO/RBAC, logging and VAPT requirements. Detailed onboarding, network and interface parameters will be provided/finalized with the successful bidder during design. The bidder shall also support annual CERT-In-empanelled VAPT, SIEM/SOAR integration, approved secure gateways, IPsec/VPN connectivity and applicable OIL ICT policies. The detailed cybersecurity RACI and onboarding checklist will be finalized during design.

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77	SOW	SOW 9.0 Sensors	Please clarify ownership of sensor data, processed data, trained AI models and configuration data, and specify the required data-export and migration format upon contract completion.	All data generated through use of the solution shall belong to OIL. At exit, the bidder shall migrate data, content, configuration documents, scripts, software and VM images to OIL or its nominated environment using industry-standard formats/media and ensure successful transition. Ownership and usage rights for trained/configured models shall be governed by the contract's IP and exit-management provisions.
78	SOW	SOW 3.1.7 and SCC 4.4 Sensors	Please define 'accuracy' separately for anomaly detection, fault diagnosis, failure prediction, health score, remaining useful life and other analytical functions.	Accuracy shall be defined separately for each analytical use case using appropriate measures, such as anomaly-detection performance, fault-classification precision/recall, prediction error, false positive/negative rates, health-score validation and RUL error. Final metrics and thresholds shall be agreed during model design and UAT.
79	SCC	SCC 4.4 Sensors	Please provide the proposed ground-truth methodology, minimum sample size, validation period, fault-event availability, false-positive/false-negative limits and confidence-interval calculation method for the 90%/95% accuracy requirements.	Ground-truth sources, datasets, sample sufficiency, validation periods, confidence calculations and false-positive/negative limits shall be agreed use-case-wise during model design and UAT.
80	SOW	SOW 3.1.7 Sensors	The solution is required to provide early failure warnings even without historical failure data. Please confirm whether rule-based, physics-based and OEM-library models are acceptable during the initial baseline-learning period.	Any of the three can be applicable, subject to OIL approval
81	SCC	SCC 4.4 Sensors	Please confirm that AI accuracy penalties will apply only to models for which OIL has provided adequate, validated and representative operating and failure data.	Model performance shall be assessed against agreed use-case-specific criteria and available validated data. For assets lacking adequate representative failure data, initial acceptance shall be based on agreed baseline, engineering-rule, physics/OEM-library and anomaly-detection validation until sufficient data becomes available.
82	SOW	SOW 3.1.7 Sensors	Please specify the minimum baseline-learning period and required advance warning period for each class of rotary equipment.	These shall be defined by equipment class, operating mode and data availability during model-design and validation.
83	SOW	SOW 13.3, UAT/SAT Sensors	Please provide detailed FAT, SAT, UAT and Go-Live acceptance criteria, including the minimum duration of stable sensor-data availability required before acceptance.	FAT shall cover configuration, channel simulation and protocol checks. SAT shall cover end-to-end sensor, connectivity and ALM validation. UAT shall cover asset registry, workflows, integrations, models, dashboards and data integrity. Detailed test cases, stable-data duration and acceptance thresholds will be approved before testing.

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84	SOW	SOW 10.0 Sensors	The first AMC year is stated as fixed quarterly charges, while years 2-5 are based on actual hours. Please clarify the expected manpower, minimum guaranteed hours, location and skill-wise rate-card requirements for years 2-5.	Shall be reviewed and suitable amendment will be issued (if required)
85	SOW	SOW 15.2 Sensors	Hardware warranty starts from the date of supply, although installation and Go-Live may occur later. Please consider commencing warranty from successful commissioning/SAT or stipulate a maximum allowable period between supply and commissioning.	Hardware warranty shall remain 18 months from the date of supply at OIL premises, as specified in the SOW. Tender conditions shall prevail.
86	SOW	SOW 15.3 Sensors	Please provide a clear responsibility matrix distinguishing warranty obligations, AMC services, software subscription, cloud services and chargeable replacement items.	Warranty covers repair/replacement of qualifying defects without additional cost. AMC covers preventive and operational maintenance, support and SLA obligations without duplicate payment for warranty-covered items. Software support is covered through SaaS licensing and AMC, while cloud services and subscriptions remain in bidder scope throughout the applicable contract period.
87	SOW	SOW 16.1 Sensors	Please specify the minimum mandatory on-site spare quantities. Also clarify whether spare sensors, gateways, batteries and transmitters are included in the BOQ or must be supplied additionally by the bidder.	The bidder shall maintain a minimum of 10% spares for deployed instruments. All required spare sensors, transmitters, gateways, batteries and associated components shall be included within the bidder's quoted scope and maintained throughout the applicable warranty/AMC period.
88	SOW	SOW 6.1 and AMC terms Sensors	Please confirm responsibility and payment provisions for replacement of batteries, damaged sensors, process transmitters, gateways, mounting hardware and other consumables during the five-year AMC.	Replacement of consumables like batteries as required for functioning of the sensors and any other repair or replacement required for the sensors installed will be within the scope of the AMC.
89	SCC	SCC 4.5 Sensors	For the 99.95% uptime SLA, please clarify the measurement point and exclusions for telecom failure, OIL system downtime, planned maintenance, power failure, third-party API failure and OIL cybersecurity restrictions.	Uptime shall be measured at the SaaS application/service availability point using the bidder's SLA-monitoring system. Applicable exclusions shall be restricted to those expressly stated in the SLA, including approved circumstances beyond bidder control. Planned maintenance requires prior OIL approval. Detailed dependency monitoring and responsibility mapping shall be finalized during design.
90	SCC	SCC 4.5 Sensors	Please confirm whether response and resolution timelines apply 24x7 or only during defined support hours, and specify the required on-site versus remote-support coverage.	Response and resolution timelines shall apply as specified in the SLA for the respective incident severity. Support shall combine remote assistance with mandatory onsite instrumentation support during AMC and additional onsite SME deployment whenever required by OIL

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91	SOW	SOW 11.0 and BOQ Items 260-280 Sensors	Please reconcile the instrument-training requirements: three OEM batches of three days and nine site batches of two days. Kindly confirm whether both are independently required.	Confirmed. Both requirements are independent: three OEM/instrument-training batches of three days each and nine site-training batches of two days each, comprising three batches at each of FHQ, PHQ and Rajasthan Field.
92	SOW	SOW 11.0 Sensors	Please provide the proposed locations, participant profiles, language requirements, laboratory/practical facilities and equipment availability for each training batch.	Training shall be conducted at mutually agreed OIL locations, including Duliajan, Guwahati and Jodhpur for site batches. Participant profiles and practical arrangements will be finalized with OIL. Training material and delivery shall be in English; the bidder shall arrange trainers and required demonstration equipment.
93	SOW	Deliverables and handover Sensors	Please confirm the complete documentation requirement, including as-built drawings, sensor-point database, calibration certificates, configuration backups, API documents, model documentation, cybersecurity documents, SOPs and source/configuration files.	The bidder shall provide complete as-built and handover documentation, including architecture and installation drawings, sensor-point/tag database, calibration and test certificates, configuration files and backups, API/interface documents, model documentation, cybersecurity artefacts including SBOM and hardening guide, operating and maintenance manuals, SOPs/runbooks and applicable source/configuration files required for operation, maintenance and exit transition. The final documentation requirements will be considered during desing phase.

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<u>BIDDER-E</u>				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	BEC	3.1.1 - Documentary Evidence for Experience Criteria 3.1.1 In support of the experience criteria under Clause No. 3.1 above, the bidder shall furnish the following documentary evidence:(a) Contract document/ Letter of Intent (LOI)/Letter of Award (LOA)/Work Order/Service Order showing detailed scope of workAND(b) Job Completion Certificate (JCC) or Service Entry Sheet (SES) or Certificate of Payment (COP) on company letter head issued by the Client and supported by Client's certified Job Report showing the following:(i) Gross value of job done(ii) Work Order No./Contract No.,(iii) Nature/Number/Description of jobs done, and(iv) Contract period and date of completion.	OIL is requested to accept a Work Order/Contract document containing the project title and a brief description of the Scope of Work, along with supporting documents such as the JCC/Completion Certificate, which clearly establish the detailed scope and successful completion of the work. This is requested as the detailed Scope of Work is not always mentioned in the Work Order/Contract document and may be provided separately through other supporting contractual documents.	Please refer to documentation clause 3.1.1 Under BEC. Any document mentioned in clause 3.1.1.a of the BEC/PQC with a detailed SOW must be submitted.
2	BEC	Notes to BEC Clause No. 3.1 - Experience Criteria Notes:(v) "Similar Job" executed through 'sub-contracting' shall not be considered for evaluation.	OIL is requested to accept experience gained through sub-contracting towards the evaluation, provided the work was executed for an eligible end-client and is supported by proper documentary evidence such as the Work Order and Job Completion Certificate (JCC) mentioning the end-client and scope of work. The scope of this tender requires specialised expertise in areas such as Asset Lifecycle Management, sensor installation and commissioning on rotary equipment, AI-based Predictive Maintenance, data acquisition and integration with Historian/SCADA and CMMS/ERP systems. Such projects are often executed through collaboration between specialised technology providers. Therefore, OIL is requested to consider relevant experience gained through sub-contracting, subject to submission of appropriate documentary evidence.	Experience gained through Sub-contracting is not allowed. The tender condition will prevail.
3	BEC	3.1 - Experience Criteria - Similar Work Clause 3.1: The bidder must have successfully executed/completed similar Works in the Oil & Gas industry in India or abroad over the last 7 (seven) years reckoned from the Original Bid Closing Date, as under:(a) One (01) completed similar work having executed value not less than INR 12,92,43,000.00 OR (b) Two (02) completed similar works each having executed value not less than INR 8,07,77,000.00 OR (c) Three (03) completed similar works each having executed value not less than INR 6,46,21,500.00	(i) OIL is requested to waive off the value of SIMILAR PROJECT for MSME or for all. (ii) OIL is requested to allow bidder to borrow experience of the OEM.	(i) Exemption criteria for MSME is not applicable. (ii) This query is under review.

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4	BEC	3.1.2 - Key Personnel The bidder shall deploy the key personnel for the implementation and post-implementation support as specified in the tender. The qualifications, experience, roles and responsibilities of the key personnel are provided under Clause 3.1.2 and its associated notes/Annexures.	OIL is requested to allow individual contractors to be considered along with the bidder's employees for deployment in the project, so that the best people can be selected for the required roles.	No change shall be made. Tender conditions will prevail.
5	BEC	Subcontracting / Assignment 24.0 SUBCONTRACTING/ASSIGNMENT: 24.1 CONTRACTOR shall not subcontract, transfer or assign the contract, or any part under this contract, to any third party(ies). Except for the main services under this contract, CONTRACTOR may sub-contract the petty support services subject to COMPANY's prior written approval. However, CONTRACTOR shall be fully responsible for complete execution and performance of the services under the Contract.	The scope of this tender involves specialised areas such as installation and commissioning of sensors on rotary equipment, AI-based Predictive Maintenance, data acquisition, Historian/SCADA integration and CMMS/ERP integration. Such projects may require support from specialised OEMs, technology providers and service partners. Therefore, OIL is requested to permit the bidder to engage specialist subcontractors/sub-vendors for specific work packages, subject to prior approval of OIL, while the bidder remains fully responsible for the complete execution and performance of the contract. Kindly confirm.	Support from OEMs may be availed. However, sub-contracting for specific work packages is not allowed.
6	SOW	13.0 - Implementation Plan 13.0 Implementation Plan: 13.1 Common Issuance of Letter of Intent (LOI): Formal authorization to initiate the project, including confirmation of scope, commercial terms, and governance structure. Kick-Off & Mobilization Period: Completion of project mobilization activities, including: (i) Formation and onboarding of the project team (ii) Finalization of project charter, execution plan (iii) Establishment of project governance, communication, and reporting mechanisms (iv) Setup of required infrastructure, tools, and access to systems/data (v) Project Manager shall submit the detailed and certified CVs of all the required personnel. Target Timeline: T0 + 1 Month for Mobilization (T1) = (30 Days). The subsequent implementation milestones and target timelines are specified under Clauses 13.2 and 13.3.	OIL is requested to allow mobilization time of 60 days and implementation time of 24 months.	No change shall be made. Tender conditions prevail.
7	Payment Terms	Important Notes, Clause 5 / Section J (Payment Terms) The total quoted price for 5 years towards AMC under Section-J of PART-II shall not be less than 20% of the total OFFER PRICE. In the event, the quoted AMC price (for 5 years) is lower than the prescribed minimum percentage, the differential amount shall be withheld by OIL through proportionate deductions...	Please clarify if this 20% minimum threshold for the 5-year AMC is evaluated on the price excluding GST or including GST, given that Input Tax Credit on GST is not available to OIL. Please also confirm that if a bidder's quoted AMC falls below 20%, they will not be disqualified but will follow the staggered withholding mechanism.	The 20% minimum AMC threshold shall be calculated on the total Offer Price including GST. If the five-year AMC price is below 20%, the differential amount will be withheld proportionately from eligible invoices and released after successful contract completion, subject to satisfactory performance. Please guided by Important notes (5) under Payment terms of the tender

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8	SOW	Section 10.0 Maintenance Terms, Clause 2 (SOW) Out of 5 years AMC, for period of 1st year, the bidder will share fixed AMC charges per quarter as defined in schedule of rates. For rest of the AMC period, the maintenance and support will be on actual consumption, and the vendor will be paid based on hours consumed for which the bidder needs to quote an hourly rate card.	(a) Is there a minimum guaranteed number of support hours per quarter or year that OIL will purchase from the vendor during Years 2 to 5? (b) What workflow and tools will be utilized to track, verify, and approve 'hours consumed' (e.g., OIL's internal ticketing system or a vendor-proposed timesheet platform)?	Will review and appropriate amendment will be provided.
9	SCC	SCC Clause 1.12 (Liquidated Damages) Contractor shall be liable to pay liquidated damages @0.5% of the total Implementation Cost, per week or part thereof of delay subject to a maximum ceiling of 7.5% of the total Implementation Cost.	Please confirm that Force Majeure events and delays directly attributable to OIL's dependencies (e.g., delay in site clearance, providing API access, SCADA availability, or tag lists) will be excluded from the LD calculation and will automatically extend the implementation timeline.	Force Majeure shall be governed by GCC Clause 31.0. Subject to timely notice and supporting evidence, affected obligations shall remain suspended and the corresponding completion period shall be extended by the duration of the Force Majeure event. Delays attributable to OIL dependencies shall be reviewed on documented merits for suitable time extension and LD applicability. Extension shall not be automatic.
10	SOW	SOW Section 18.2 vs. Financial Breakup Part-I SOW Section 18.2 (Hardware BOQ): Wireless Vibration Sensors: 500, Wireless Pressure Transmitters: 100, Wireless Temp Transmitters: 100, Edge Gateways: 10. Financial Breakup Section C (Hardware Supply): Wireless Vibration Sensors: 550, Wireless Pressure Transmitters: 110, Wireless Temp Transmitters: 110, Edge Gateways: 15.	Which Bill of Quantities (BOQ) is final and authoritative for pricing? A discrepancy of 50 vibration sensors, 10 pressure/temp transmitters, and 5 gateways represents a highly significant cost variance in the hardware estimate.	Shall be reviewed

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11	SOW	Section 10.0 Maintenance, Clause 39 vs. SOW Section 15.2 Clause 39: During the entire duration of the Annual Maintenance Contract (AMC) of five (5) years, any hardware supplied, installed, or commissioned by the bidder that becomes faulty, damaged, non-functional, or fails to perform as per the required specifications, whether due to manufacturing defects, component failure, or normal wear and tear, shall be repaired or replaced by the bidder at no additional cost to the Client. SOW Section 15.2: The warranty on equipment/materials will be for 18 months and will start from the date of supply of Hardware at OIL Premises. The supplier shall repair or replace any item or equipment found defective in materials or workmanship or performance within the above period at no additional cost to OIL.	Please clarify if the vendor must provide a comprehensive 5-year hardware replacement warranty under the AMC period, or if hardware failures after the 18-month warranty are subject to separate spare-part billing. If a comprehensive 5-year replacement is required, please confirm if this applies to natural wear-and-tear or includes lightning/electrical surges at oilfield sites.	Shall be reviewed
12	SOW	SOW Section 16.6 Approved OEMs & BEC Clause 3.2 SOW 16.6: The Bidder shall procure all Instruments & Sensors only from OEMs approved by the OIL prior to procurement. BEC Clause 3.2: The Bidder shall be authorised by the OEMs of the hardware (instruments) used during the implementation. Bidder shall submit a valid authorization letter/certificate (As per Proforma-XXXIII), from the OEM's of the following hardware: (i) Wireless Magnetic Vibration Sensors, (ii) Wireless Pressure Transmitters, and (iii) Wireless Temperature Transmitters.	Will OIL share a pre-approved list of OEMs for the wireless vibration sensors, pressure transmitters, and temperature transmitters? If not, can bidders submit proposed OEMs during the bid process, and what is the approval turnaround time for obtaining Manufacturer Authorization Forms (MAFs)?	Shall be reviewed
13	SOW	SOW Section 6.1 (Sensors), Item 1(l) & 3(h) Item 1(l): Hazardous area certification: Intrinsically Safe IP66 Flameproof. Item 3(h): Hazardous area certification: Intrinsically Safe IP66 Flameproof.	Please confirm if all field-deployed sensors, transmitters, and edge gateways must hold valid PESO (Chief Controller of Explosives, India) certifications in addition to international ATEX/IECEX. Compliance with Indian statutory guidelines is mandatory for oilfield sites.	IECEX or ATEX or PESO test certification from an eligible accredited/notified body is acceptable as supporting technical evidence
14	SOW	SOW Section 6.1 (Sensors), Item 1(e) & 3(a) Item 1(e): Battery & Battery Life: Commercially available in open market & non-proprietary Lithium Battery & upto 10 years. Item 3(a): Battery & Battery Life: Commercially available in open market & non-proprietary Lithium Battery & upto 10 years.	Please specify the default measurement and data publish interval (e.g., hourly, daily) required to achieve the 10-year battery life. Frequent publish rates (e.g., 1-minute intervals) rapidly drain batteries. If frequent updates are required, the bidder must budget for battery replacement cycles in the AMC.	The default measurement frequency and data publish interval to be decide during detailed design phase

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15	SOW	SOW Section 14.0 (Installation), Clause (i) Supply of all the material as required for completion of the entire scope of the contract is the responsibility of the BIDDER. This scope only includes the major items/instruments. However, all the necessary hardware like Junction Boxes, nameplates, tubing/piping, tube trays, Instrumentation fittings, signal cables, communication cables and power cables, interconnecting cables, cable glands, instrument canopy for cable trays, surge protectors, supports, MCTs, stanchions, flanges, gaskets, nuts, bolts, instrument earthing, mounting arrangements etc., and software requirements for effective hook-up and interfacing to make the system complete and safe for operation and maintenance shall be deemed to be included in the scope of work.	Will OIL provide the physical structural supports and stanchions near the rotary equipment, or is the bidder responsible for structural fabrication? Is there a maximum distance limit assumed for cabling/tubing from the equipment to the Edge Gateways?	The bidder shall supply and fabricate all stanchions, supports, mounting arrangements, cabling and tubing required for complete installation. No maximum sensor-to-gateway distance is specified; it shall be finalized through site survey and wireless/network design.
16	SOW	SOW Section 5.11 (Data Ingestion), S.No 1 Note / Section 5.7 The compressors (18 nos. shortlisted for sensorization, initially) are already equipped with electronic control panels with provision/possibility for data extraction by a third party. The Electronic Control Panel OEM for these shortlisted 18 compressors is M/s Altronic, USA. The concerned instrumentation panel OEM, including Altronic, may need to be contacted through OIL's instrumentation department based on the requirements of the ALM initiative. Further, for assets inside SCADA, the bidder shall liaise with M/s ABB / M/s Yokogawa, as applicable, for integration requirements.	Who will bear the licensing and professional service costs charged by ABB/Yokogawa or Altronic for modifying the existing SCADA systems, mapping new tags, or adding communication nodes? Will OIL pay these OEM charges directly, or must the bidder factor them into the integration charges?	OIL will facilitate coordination and access. The bidder shall factor ABB/Yokogawa/Altronic engineering, licences, tag mapping, communication-node modifications and other OEM support necessary for successful integration into its quoted integration charges.
17	SOW	SOW Section 5.11 (Data Ingestion), S.No 2 Note Communication is to be established through cellular connectivity through M2M SIM cards along with a dedicated Private APN over an MPLS network...	(a) Who is responsible for procuring the M2M SIM cards and setting up the cellular MPLS link? (b) Who bears the recurring monthly telecom subscription charges for the SIM cards over the 5-year AMC period—OIL or the bidder?	Site-wise LTE availability will be assessed during field survey. OIL shall provide the required dual-SIM arrangement & recurring data charges to be borne by OIL
18	Price Bid	Line Item 290 / SOW Software BOQ Financial Breakup, Line Item 290: Software licensing cost (For SaaS based solution) organization wide for 5 years. SOW Section 18.1: Asset Lifecycle Management (ALM) Software for Assets available in Annexure-B - 1 Lot.	What is the estimated or maximum user count (such as Named Users, Active Users, or Concurrent Users) that must be licensed for the 'organization-wide' SaaS platform? Software OEMs require user-band metrics to provide pricing.	Approximately 200 active users shall be supported, with organization-wide licensing for OIL.
19	SOW	SOW Section 18.1 (Software BOQ) vs. SOW Section 5.11 / 5.1 Software BOQ lists 'Windows OS licenses - For all Servers / workstations' vs. 'ALM solution shall be deployable as SaaS'.	If the core system is hosted on a public cloud under a SaaS model, please clarify why server Windows OS licenses are requested. Are these OS licenses only intended for the local edge gateway/workstation PCs?	Shall be reviewed

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20	SOW	SOW Section 9.0 (Cloud), Clauses (i) to (iii) OIL has already setup a secure cloud landing zone in MS Azure. The bidder shall have to route all traffic initiated towards the proposed public cloud hosting relevant application through OIL's above-mentioned landing zone in Azure. Any data transmission cost, if applicable, from the offered public cloud to OIL's landing zone/Azure must be factored by the bidder in his offer.	Please provide the estimated monthly data egress volume (in GB/TB) expected to flow from the SaaS public cloud to OIL's Azure landing zone to allow accurate bandwidth and transmission cost estimation.	Estimated monthly data-egress volume is not specified. It shall be determined during detailed design based on tag count, sampling frequency, retention, dashboards and integration flows. The bidder shall factor applicable data-transmission costs into its offer.
21	SOW	SOW Section 3.1 & Section 5.8 SAP S/4HANA will act as the primary database... master data source will be SAP. The Vendor shall be solely responsible for arranging Adapters, connectors, tools, or add-ons.	(a) Will OIL's SAP support team expose standard OData services or REST APIs for SAP S/4HANA PM/ERP modules, or must the bidder build custom ABAP RFCs/BAPIs on OIL's SAP system? (b) Who will bear the licensing costs of third-party SAP connector adapters (if required)?	Vendors are fully responsible to end to end integrations. OIL will expose CPIs. In addition as written in clause 3.9 SAP license will be provided by OIL
22	SCC	SCC Section 4.4 SLA linked to tool accuracy: <95% accuracy and >=90% accuracy with 90% confidence interval attracts 2% penalty of the quarterly AMC invoice... <85% accuracy attracts 7.5% penalty.	(a) Will there be a penalty-free stabilization and calibration period (e.g., during the 3-month Hypercare) to allow the AI/ML models to ingest real-time data and establish baselines before penalties apply? (b) How is 'ground truth' established for assets that do not fail during the evaluation period?	Accuracy requirements shall first be demonstrated during implementation/UAT and subsequently during production operation. The use-case-specific validation methodology defining the ground-truth dataset, test period, sample size, exclusions, confidence methodology, baseline and revalidation frequency will be defined during Design Phase

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<u>BIDDER-F</u>				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	BEC	11.0 CERTIFICATION OF DOCUMENTS BY INDEPENDENT THIRD-PARTY INSPECTION AGENCIES (TPIA): 11.3 The verified and certified documents (as mentioned in Para 12.2 above) must be submitted along with the Technical Bids. Any bid submitted with unverified supporting documents shall not be considered.	We request OIL to kindly accept bids with the TPIA certifying experience of the bidder after going through/inspecting the bidders documents at the bidders premises.	Please be guided by the TPIA Clause (BEC Clause No. 11.0 of the tender)
2	BEC	3.1 EXPERIENCE CRITERIA, 3.1.1 In support of the experience criteria under Clause No. 3.1 above, the bidder shall furnish the following documentary evidence: (a) Contract document/ Letter of Intent (LOI)/Letter of Award (LOA)/Work Order/Service Order showing detailed scope of work AND (b) Job Completion Certificate (JCC) or Service Entry Sheet (SES) or Certificate of Payment (COP) on company letter head issued by the Client and supported by Client's certified Job Report showing the following: (i) Gross value of job done (ii) Work Order No./Contract No., (iii) Nature/Number/Description of jobs done, and (iv) Contract period and date of completion.	We request OIL to kindly accept completion email from Client official ID as proof of completion. If the job completion certificate/email has scope of work and contract value then please clarify whether it is required to submit PO/WO from Client	Any document which substantiates the experience of the bidder as per Clause No. 3.1 of the BEC shall be accepted. Accordingly, Clause No. 3.1.1 of the BEC shall be reviewed.
3	SOW	SECTION-II: SOW,2.0 OIL is also implementing a GIS based Asset Management Information System (AMIS) which will include increased asset visibility, improved asset utilization, reduced maintenance costs, and improved compliance with regulations and standards.	What GIS platform and modules are being implemented? Is this Asset Master going to be synched with the SAP HANA Asset Master ? What are the expected interface availability?	SAP S/4HANA shall remain the authoritative source for applicable enterprise master and transactional data. The ALM solution shall provide the two-way integrations required by the SOW. Detailed objects, APIs/BAPIs/IDocs, middleware, roles and responsibilities will be finalized during design; bidder-side connectors, adapters and integration effort shall be included in the offer.

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4	SOW	3.1 Solution Description The proposed software for Predictive Analytics Based Maintenance solution should be COTS (commercially-off-the-shelf) software or any existing application wherein the components can be reused for fresh deployment that caters to the customer's requirements.	OIL may please explain/clarify the meaning of the sentence" or any existing application wherein the components can be reused for fresh deployment that caters to the customer's requirements" in the light of requirement of deployment with COTS product.	A COTS application or an existing stable product with valid intellectual-property rights may be proposed, provided it meets the complete SOW, is freshly deployed/configured for OIL and is supported for the full contract period.
5	SOW	3.1.2 Asset Data Management The solution should be able to track and report each asset's current position - by location, functional position, or tag - as well as its historical locations and maintenance records by integrating with SAP and OIL's Asset Management Information System (AMIS).	What categories of Asset information is going to be stored in the AMIS	It shall be same as the categories of Asset information mentioned in SAP
6	SOW	3.1.8 Health Assessment & Condition Monitoring (HACM) Program for Static Equipment and Piping (e) Risk-Based Inspection (RBI) Integration (i) Combine health assessment results with risk-based inspection strategies. (ii) Prioritize inspections based on risk levels (Probability and consequence of failure).	Does the bidder need to implement a Risk based Inspection System? OIL may please confirm/clarify	The bidder shall provide and configure the complete HACM/RBI functionality specified in the SOW, including health assessment, risk-based prioritization and inspection recommendations for the tendered static equipment/piping scope. Detailed asset/circuit coverage and engineering inputs will be finalized during requirement finalization.
7	SOW	4.0 Functional Requirement, 4.1 Workflow Management Solution should be able to have a built-in as well as email notification options to end users to choose from. Based on user's choice of notification, he/she should receive all notifications.	Does the bidder need to integrate with OIL's existing email System? If so please clarify the current email system in use at OIL.	Yes. The solution shall support built-in and email notifications. OIL will provide the applicable SMTP/connectivity details during design; integration and configuration are in the bidder's scope.
8	SOW	4.2 Asset Management Module Pt (v) Solution should be able to integrate with existing condition monitoring systems	Will the condition monitoring systems be directly integrated or through the OT Data lake? If to be directly integrated, what are the existing condition monitoring systems to be integrated with? How many are there? What interfaces (OPC) do they provide?	Sensor/OT telemetry shall be routed through OIL's OT Data Lake in accordance with the tender cyber architecture. Detailed technology, interfaces, data flows and frequencies will be shared/finalized during design. The bidder shall include all components and integration effort required within its scope.

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9	SOW	4.4 Reporting and Analytics Module Pt (vi), Cyber Security Architecture Solution should be able to ingest and analyze data from sensors (e.g. vibration, temperature) to trigger alerts or maintenance events	We assume this will be done through SCADA. OIL may please confirm/clarify	Data shall be routed through OIL's OT Data Lake in accordance with the cyber architecture provided in the Tender
10	SOW	4.2 Asset Management Module Pt (xii) User should be able to: - Define business KPIs covering respective threshold values, - Build user specific dashboard based on data available within the Solution (to monitor business KPIs) where set thresholds are referred to by the Solution when displaying data.	Approximately how many Business KPI's and Dashboards need to be configured/developed?	KPIs & Dashboards to be finalized during design phase
11	SOW	4.5 AI Based Predictive Maintenance Module Pt (i) and (iii) , Cyber Security Architecture Integration with SAP S/4HANA PM/ERP/Stores, condition monitoring systems, historian and OT data lake; SCADA/DCS read-only Collect real-time equipment data such as vibration, pressure, temperature, RPM, motor current, acoustics, torque, and fluid levels using IoT sensors, PLCs, and SCADA. Edge devices should perform preliminary filtering, time-synchronization, and buffering of sensor data.	We understand as per the Cybersecurity diagram, integration has to be done only with the OT data lake for the southbound interface. OIL may please confirm/clarify	Please refer to the cybersecurity architecture provided in the Tender
12	SOW	4.5 AI Based Predictive Maintenance Module Pt (vi) , Cyber Security Architecture Must integrate with PI System / OSIsoft, Yokogawa, Honeywell, Rockwell, ABB, Schneider Emerson DCS/SCADA architectures and extract historical time-series for ML model training.		
13	SOW	4.5 AI Based Predictive Maintenance Module - System integration Architecture Pt v Solution should fully integrated with existing CAD module that uses the most popular CAD standards without requiring the installation of applications which should allow to read graphically, analyze, interact with, and navigate the drawings and plans	What is the existing CAD Module at OIL and the interfaces available	The solution to nallow users to upload , view and link standard CAD formats directly to equipment tags or asset hierarchies.

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14	SOW	4.5 AI Based Predictive Maintenance Module - System integration Architecture Pt vi Solution should fully integrate with existing BIM module which can embrace Building Information Modeling (BIM) and supports IFC, the leading interoperability standard.	Who is the OEM of the existing BIM module and the IFC integration version interfaces supported?	At present OIL is not having a BIM module, but the ALM solution need to have the capability for integration.
15	SOW	5.0 Technical Requirement (System, Hardware, Software etc.), 5.1 Sensor installation Pt (ix) and (x) Vendor shall ensure adequate connectivity with the (Power connection for equipment will be supplied and supported by OIL electrical & instrument team) like cabling, piping for: (a) Pressure/temperature/flow sensors (b) RTUs/PLCs (c) Communication gateways (LoRaWAN, NB-IoT, Wi-Fi, etc.) (d) Edge computing devices Sensor data shall be fetched from OT Data Lake, and the digital solution shall be deployable as SaaS solution.	Please confirm the following: - Whether the sensors shall be hooked to communication Gateways. - Communication Gateways supply is in the scope of this tender - Where will the communication Gateway send data to? Existing SCADA? If so what is the preferred protocol or does the bidder supply the SCADA. - Finally the SCADA needs to be integrated with the OT Data lake.	- For wireless sensors, MPLS network is with OIL; & For wired sensors, it will be through SCADA - Communication Gateways supply is in Bidders' scope - Data will be sent to existing SCADA; Bidder is not expected to supply the SCADA - Integration of existing SCADA with OT Data lake is not part of the scope
16	SOW	5.7 AI Based Predictive Maintenance - (i) Data Acquisition Layer The Electronic control panel OEM for these shortlisted 18 compressors is M/S Altronic, USA. The OEM is well aware of requirements as well as their needful action for Predictive Maintenance based initiatives & groundwork including requirements of power and provisions required in their panels for data sharing for any such new initiatives. Concerned Instrumentation panel OEM, including Altronic, may need to be contacted via OIL's instrumentation dept. based on requirements of ALM initiative.	What are the interfaces available from these control Panels for taking data? Is the panel having communication ports or provides hardwired signals? OIL may please clarify. Please provide the contact person of OIL's instrumentation department.	All types of communication ports are supported. Details of contact person of OIL shall be shared during Implementation.
17	SOW	5.7 AI Based Predictive Maintenance - (ii) Data Integration Layer The ALM solution shall be deployable as a Software-as-a-Service (SaaS) offering.	We understand that the bidder needs to deploy the ALM Solution on Cloud. OIL may please confirm/clarify	The ALM solution shall be delivered as SaaS & deployed on Cloud.

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18	SOW	5.7 AI Based Predictive Maintenance - (ii) Data Integration Layer Historian integration via PI AF SDK, REST API, JDBC drivers or OSIsoft OMF API.	We understand that this Historian pertains to the OT Data lake Historian. OIL may please confirm/Clarify. Please also clarify why OSI Soft OMF AP, PI AF SDK has been included in the list of drivers. Is the existing OT data lake historian OSI PI?	One central historian for ALM which is different from the OT Data Lake historian OT Data Lake historian details are irrelevant
19	SOW	The RFP requires ALM/EAM capabilities together with two-way integration with SAP S/4HANA.	Please define the system-of-record responsibilities between the proposed ALM solution and SAP S/4HANA for asset master, functional locations, work orders, maintenance plans, task lists, failure codes, criticality, inventory, costs and lifecycle status.	ALM Solution shall trigger the maintenance order to SAP system and let SAP system create the work order. All the supporting documents / data required to create work order in SAP should be fetched from ALM solution
20	SOW	The RFP calls for a central asset registry aligned with the SAP asset hierarchy.	Should the proposed ALM platform become the enterprise master asset registry, or maintain a synchronized analytical copy of the SAP equipment and functional-location hierarchy?	It should maintain a synchronized analytical copy of the SAP equipment and functional-location hierarchy
21	SOR	SECTION-IV SCHEDULE OF RATES (SOR) Master Data Foundation - cleansing, deduplication, templates, attribute mapping and catalogues	Please provide the expected data volumes for equipment, functional locations, BOMs, materials, maintenance plans, task lists, measuring points, documents, warranties, work orders, notifications, failures, downtime, inspections and condition data.	Historical-data volume will be assessed during discovery
22	SOR	SECTION-IV SCHEDULE OF RATES (SOR) Master Data Foundation - cleansing, deduplication, templates, attribute mapping and catalogues	Please clarify responsibility for correcting source-system data and approving cleansed/mapped data. Will OIL provide data owners and sign-off authorities for each business object?	The bidder shall cleanse and prepare the available data for model development; OIL shall approve the the cleansed / mapped data provided by the Bidder
23	SOW	3.1.8 Health Assessment & Condition Monitoring (HACM) Program for Static Equipment and Piping	Please provide approximate count of the the static Equipment and piping to be covered 1. List of Asset class under static Equipment and piping - pressure vessels, heat exchangers, storage tanks, piping etc 2. Count of the Assets under Static Equipment and piping	List of equipments already mentioned in the scope under Annexures A & B. ALM Solution to be scalable to take up more equipments, of the same type and not included as a part of this scope, in the future (as and when sensorized by OIL).

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

24	SOW	The RFP requires maintenance-order generation, status exchange, spare consumption and failure-log updates.	Please confirm the required integration mechanism for SAP, and whether SAP configuration, custom APIs/BAPIs/IDocs, middleware, security roles and transports are in bidder scope or will be handled by OIL/OIL's SAP partner.	SAP side end to end delivery of the integration solution shall be done by the bidder. OIL will facilitate in giving access to SAP S/4HANA Private Cloud development and test environments, subject to internal access control policies
25	SOW	RCM, Failure Criticality Analysis and HACM/RBI requirements The RFP includes criticality, RCM/FCA, integrity and RBI-related functionality and recommendations.	Please clarify whether the bidder must perform complete RCM/FCA/RBI engineering studies, or only configure the software and migrate existing study results. If studies are required, please specify the number of assets/asset classes/circuits and expected workshops/deliverables.	The bidder shall provide and configure the complete HACM/RBI functionality specified in the SOW, including health assessment, risk-based prioritization and inspection recommendations for the tendered static equipment/piping scope. Detailed asset/circuit coverage and engineering inputs will be finalized during requirement finalization.
26	SOW	Refer: OT Data Lake, Historian, PI and SCADA integration clauses The RFP refers to exclusive data consumption from the OT Data Lake, PI/historian integration, direct OT-system connectivity and a new historian capacity.	Please confirm the authoritative runtime data source and target architecture across SCADA/DCS/PLC, PI/existing historian, the proposed historian, OT Data Lake and SaaS ALM/APM. Is direct connectivity from ALM/APM to OT systems permitted?	The approved runtime flow is: Sensors/PLC/SCADA → SCADA MCS → OT Data Lake → SaaS ALM/APM. The ALM solution shall consume sensor data exclusively from the OT Data Lake. Direct ALM connectivity to SCADA/DCS/PLC is not envisaged; Kindly refer to and follow the approved cyber architecture mentioned in the tender.
27	SOW	AMC / Enhancements / Addition of Assets clauses The RFP includes enhancements, graphic changes and addition of equipment/facilities during support without clearly stated limits.	Please quantify the maximum assets, tags, sensors, users, interfaces, models, dashboards, reports and enhancement effort to be included without additional commercial impact during implementation and the five-year AMC.	Bidders shall consider the quantities and scope specified in the SOW, annexures and Price Bid, including the 50,000-tag historian and prescribed sensor/gateway quantities. No separate cap is specified for models, dashboards, reports or enhancements required to meet the tendered scope. These shall be included without additional commercial impact.

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28	SOW	Asset Model Library (4.6)	The list of the equipment models covering 15-20 Equipment class are given-Drilling Rig equipment,Sucker Rod Pump Components,etc Please share the approximate count of the equipments to be covered under the equipment model	The asset-model library shall cover the equipment classes and assets identified in Annexures A and B, including drilling rig equipment, pumps, compressors and other specified rotary/static assets. The detailed equipment-wise model count will be finalized during asset discovery and requirement finalization.
29	SOW	4.0 Functional Requirement HACM -Static Equipment and Pipeline Module (4.8)	Please share the approximate count of the equipments to be covered under the HACM module (Static Equipment and Pipeline Module) Please provide the final list of static equipment, piping circuits and pipeline segments included in HACM.	The bidder shall provide and configure the complete HACM/RBI functionality specified in the SOW. The exact asset, piping-circuit and pipeline-segment inventory will be finalized during requirement finalization based on available OIL records.
30	General		Is the bidder expected to perform RBI studies and inspection-plan engineering, or only configure calculations and manage existing RBI results?	The bidder shall provide and configure the complete HACM/RBI functionality specified in the SOW.
31	General		Does OIL already have an electronic permit-to-work/LOTO system? If yes, should the bidder integrate with it rather than replace it?	OIL does not have an electronic permit-to-work system
32	General		Please clarify the reference to “OpenCAD” and whether a specific product or standard is mandated.	The solution shall allow users to upload , view and link standard CAD formats directly to equipment tags or asset hierarchies.
33	General		Please clarify whether ISO 14224/ISO 55000 “compliance certification” requires third-party certification or project-level conformity validation.	Please be guided by the tender terms & conditions

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34	SOW	5.0 Technical Requirement Section 5.11 Data Ingestion Requirement	All the new sensors to communicate via M2M SIM to SCADA Master Control Station (MCS) . Oil India to confirm that the changes in existing SCADA to configure new tags (Pressume transmitter, Temp Tranmitter) ,etc shall be done by Oil India OT team and SI will only install the sensors and enable communication with existing SCADA Master Control Station (MCS)	Confirmed
35	SOW	Section 5.11 Cyber Architecture Asset Lifecycle Management	The field to cloud telemetry is routed through OT Datalake. Please confirm if the OT data lake (which feeds into Asset lifecycle mgmt solytion) set-up activities such as install /configuration /Integration with multipte SCADA through DMZ will be done by Oil India or it is part of the System Integrator scopr	OT data lake will be setup by OIL; Data will be available even if not implemented as data resides in servers
36	SOW		Will OIL provide development, test, UAT and production instances of each source system?	Yes
37	SOW		Will OIL supply an approved ISO 14224-compliant taxonomy, asset hierarchy and failure/damage/cause catalogue, or must the bidder create and obtain approval for these?	The bidder shall develop, cleanse, standardize and configure the asset hierarchy and failure/damage/cause catalogues required under the SOW, aligned with ISO 14224 and OIL requirements. Existing OIL/SAP taxonomies and catalogues, where available, will be shared as inputs. Final structures shall be reviewed and approved by OIL.
38	SOR	Section IV : Schedule of Rates -Historian SW for 50,000 tags	SI is required to provide a HISTORIAN for 50,000 tags. 1. Does this refer to Data Lake provided in the Cyber Architecture Asset Lifecycle Management 2. Has Oil India set-up site level / enterprise historian to which the Historian for Asset lifecycle can connect	ALM will have its own central historian

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39	SOW	14.1 ITB- Period of validity of Bids If nothing is mentioned by the bidder in their bid about the bid validity, it will be presumed that the bid is valid for 120 days from Bid Opening Date.	It is requested to amend this clause. Bid validity period should be counted from the date of closing of bid.	Bid validity shall be 120 days from the date of bid opening. Please be guided by the tender conditions.
40	GCC	14.12. Vi GENERAL CONDITIONS OF CONTRACT (GCC) Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY): CONTRACTOR shall, ensure that all his/its personnel deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of OIL.	If the deployed resources are already covered in any other Accidental Insurance & Term Life Insurance with higher amount of coverage & better facility as per policy of the contractor's company, is it mandatory to take addition insurance once again for all deployed resources under these two insurance scheme?	Please be guided by the Clause No. 14.0 of the GCC. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
41	GCC	30 GENERAL CONDITIONS OF CONTRACT (GCC) TIMELY MOBILIZATION AND LIQUIDATED DAMAGES: If the contractor is unable to mobilize/deploy and commence the operation within the period specified in sub clause (a) above, it may request OIL for extension of the time with unconditionally agreeing for levy and recovery of LD. Upon receipt of such a request, OIL may at its discretion, extend the period of mobilization and shall recover from the CONTRACTOR, as an ascertained and agreed Liquidated Damages, a sum equivalent to @ 0.5% of contract value including mobilization cost, per week or part thereof of delay subject to maximum of 7.5% of the Contract Price.	It is requested to amend this clause and reduce the maximum liquidated damages to 5% of the contract price as follows: "TIMELY MOBILIZATION AND LIQUIDATED DAMAGES: If the contractor is unable to mobilize/deploy and commence the operation within the period specified in sub clause (a) above, it may request OIL for extension of the time with unconditionally agreeing for levy and recovery of LD. Upon receipt of such a request, OIL may at its discretion, extend the period of mobilization and shall recover from the CONTRACTOR, as an ascertained and agreed Liquidated Damages, a sum equivalent to @ 0.5% of contract value including mobilization cost, per week or part thereof of delay subject to maximum of 5% of the Contract Price".	No change. Tender Condition prevails.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

42	SCC	1.13 of Special Condition of Contract Liquidated Damages: In the event of the Contractor's default in timely 'Go Live' of the project within the stipulated period [12 months from the date of issuance of LOA], the Contractor shall be liable to pay liquidated damages @0.5% of the total *Implementation Cost, per week or part thereof of delay subject to maximum ceiling of 7.5% of the total *Implementation Cost. Liquidated Damages shall be reckoned from the expiry date of the scheduled 'Go Live'.	It is requested to amend this clause as follows: "Liquidated Damages: In the event of the Contractor's default in timely 'Go Live' of the project within the stipulated period [12 months from the date of issuance of LOA], the Contractor shall be liable to pay liquidated damages @0.5% of the total *Implementation Cost, per week or part thereof of delay subject to maximum ceiling of 7.5% of the total *Implementation Cost. Liquidated Damages shall be reckoned from the expiry date of the scheduled 'Go Live'."	Ammendment suggested is same as the original clause
43	SCC	4.4 SLA LINKED TO TOOL ACCURACY-Penalty 3. <90% accuracy and ≥85% accuracy with 90% confidence interval -5% of the Quarterly AMC invoice 4. <85% accuracy- 7.5% of the Quarterly AMC invoice & mandatory correctiveaction plan	It is requested to cap the total penalty at 5% of the Quarterly AMC invoice and requested to amend those clauses as follows: "3. <90% accuracy and ≥85% accuracy with 90% confidence interval -3.5% of the Quarterly AMC invoice 4. <85% accuracy- 5% of the Quarterly AMC invoice & mandatory correctiveaction plan...."	Not acceptable. Tender condition shall prevail
44	SCC	4.5.3 POST-IMPLEMENTATION PHASE iii) The upper limit of penalty would be capped at 15% of the AMC value for each quarter.	It is requested to reduce the upper limit of the penalty for each quarter and amend the clause as follows: iii) The upper limit of penalty would be capped at 5% of the AMC value for each quarter.	Not acceptable. Tender condition shall prevail
45	SCC	4.5.3 POST-IMPLEMENTATION PHASE (iv) In the event of non-deployment or absence of the required manpower resources during the AMC period, a penalty of ₹10,000/- per day shall be levied and recovered from the Contractor's quarterly AMC invoice, subject to a maximum of 7.5% of the quarterly AMC charges.	It is requested to reduce the total penalty for non deployment or absence of the required manpower resources during the AMC period and amend the clause as follows: (iv) In the event of non-deployment or absence of the required manpower resources during the AMC period, a penalty of ₹ 5,000/- per day shall be levied and recovered from the Contractor's quarterly AMC invoice, subject to a maximum of 5% of the quarterly AMC charges."	Not acceptable. Tender condition shall prevail

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

46	SCC	Service Level Agreement & Penalty	It is requested to add one new clause and cap the cumulative SLA penalty at 5% of the quarterly AMC charge.	Not acceptable. Tender condition shall prevail
47	Payment Terms	Payment Terms 'IMPLEMENTATION PHASE' 1) Placement of purchase order for finalized instruments and Receipt of all the material at the site: Contractor to submit the receipt of material invoice along with Inspection, certifications, FAT & warranty documents-70% of the actual value of the supplied hardware items under Section C of PART-I as per BOQ. 2) Completion of SAT / Go - Live-30% of the actual value of the supplied hardware items under Section C of PART-I as per BOQ.	It is requested to change the payment term for the hardware items as follows: 1) Placement of purchase order for finalized instruments and Receipt of all the material at the site: Contractor to submit the receipt of material invoice along with Inspection, certifications, FAT & warranty documents-80% of the actual value of the supplied hardware items under Section C of PART-I as per BOQ. 2) Completion of SAT / Go - Live-20% of the actual value of the supplied hardware items under Section C of PART-I as per BOQ.	Not acceptable. Tender condition shall prevail
48	Payment Terms	Payment Terms	'IMPLEMENTATION PHASE'-It is requested to change the payment term for the third party software. It should be 100% on delivery of the software	Not acceptable. Tender condition shall prevail
49	Payment Terms	Payment Terms a. INFRASTRUCTURE- Subscriptionbased - Items (Cloud/SaaS)- Payment shall be made quarterly* for subscription line items under Section-I of PART-II as per BoQ, subject to submission of monthly bills/invoices for subscriptions for each month within the quarter.	It is requested to change the payment term as follows: a. INFRASTRUCTURE- Subscriptionbased - Items (Cloud/SaaS)- Payment shall be made monthly* for subscription line items under Section-I of PART-II as per BoQ, subject to submission of monthly bills/invoices for subscriptions for each month within the month.	Not acceptable. Tender condition shall prevail
50	Payment Terms	Payment Terms AMC Payment- AMC for 1st year (including Hypercare), 2nd Year, 3rd Year, 4th year & 5th Year - AMC (Section-J under PART-II of the BOQ) and all the Quarterly payments will be released after completion of the quarters after deduction of penalty (if any) post go-live and completion of hyper care period.	It is requested to change the payment term as follows: AMC Payment- AMC for 1st year (including Hypercare), 2nd Year, 3rd Year, 4th year & 5th Year should be yearly advance.	Not acceptable. Tender condition shall prevail
51	BEC		Kindly consider inclusion of Power, Metal & Mining sectors	Not acceptable. Tender condition shall prevail

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

BIDDER-G

Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	Item 1 bundles 12 modules under a single lumpsum. Could OIL provide module-wise priority ranking (must-have at Go-Live vs phase-2 deployment) so we can plan resource allocation and avoid pricing for modules that may be deferred?	The price Bid Format of the tender is under review.
2	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	For Module 8 (HACM - Static Equipment and Pipeline), is the expected scope limited to RBI per API 580/581 and IDMS, or does it include additional capabilities such as FFS per API 579 (Level 1 / Level 2 / Level 3)?	The price Bid Format of the tender is under review.
3	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	For Module 7 (Reliability Centered Maintenance), should the solution support full RCM2/RCM3 methodology, or only Streamlined RCM? Also, does OIL require integration with existing RCM analyses (if any) or fresh studies under this scope?	The price Bid Format of the tender is under review.
4	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	For Module 5 (AI Based Predictive Maintenance), please confirm whether the scope is limited to rotary equipment (as suggested by the BOQ Job Description), or includes static equipment, pipelines, and instrumentation. What is the expected number of equipment to be onboarded to AI predictive models at Go-Live?	The price Bid Format of the tender is under review.
5	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	Apart from the equipment mentioned in Annexure-B, are there additional assets, fixed or rotary?	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

6	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	Item 3 references 'Historian Software for 50,000 Tags.' Is this an installation-wide cumulative figure or per-location (FHQ, PHQ, RF)? Also, is OIL open to an alternative time-series database (e.g., InfluxDB Enterprise) in place of a traditional historian (e.g., AVEVA PI), or is OSIsoft PI / equivalent a hard requirement?	The price Bid Format of the tender is under review.
7	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	Item 2 reads 'Web & Mobile Browser Application.' Does OIL require native iOS and Android applications?	The price Bid Format of the tender is under review.
8	SOW	A. ALM Platform & Functional Modules - Software Supply (Items 1-3)	Module 10 (Mobility) overlaps with Item 2. Please clarify whether Module 10 is the mobile front-end for ALM functions (work order execution, notifications, inspections) and Item 2 is the development effort, or whether they cover distinct scope.	The price Bid Format of the tender is under review.
9	SOW	B. Hardware Supply (Items 4-15)	The BOQ provides 500 wireless vibration sensors, 100 pressure transmitters and 100 temperature transmitters. Annexure A appears to list ~400+ rotary equipment units across compressor stations, LPG plants, pipeline pumps and field installations. Could OIL confirm: (a) the exact number of critical equipment to be instrumented, and (b) the sensor-per-equipment configuration assumed in this BOQ?	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

10	SOW	B. Hardware Supply (Items 4-15)	Items 4-10 (Cloud Web Hosting, App Layer, Compute, API Gateway, DB, Security, VNet) are quoted as 'Nos' with UOM in units - but cloud services are typically recurring (per month/year). Should these be quoted as one-time architecture and setup, or as 5-year subscription cost? Also, are these distinct from Item 35 (Cloud Subscription) or part of the same envelope?	The price Bid Format of the tender is under review.
11	SOW	B. Hardware Supply (Items 4-15)	Will OIL facilitate a pre-bid site survey at representative installations (one each of GMS, LPG plant, pipeline pump station)? Without site visibility, our BOM may either over-engineer (added cost) or under-spec (rework risk).	The price Bid Format of the tender is under review.
12	SOW	C. Spare Instruments (Items 16-19)	For Note 6.0 (faulty instrument replacement during AMC), please confirm: (a) are the 50 spare vibration / 10 spare temp / 10 spare pressure / 5 spare gateway sufficient for the full 5-year AMC period, or is there an 'as-and-when' replacement clause beyond these spares? (b) Who bears the cost of replacement beyond spare exhaustion - bidder or OIL?	The price Bid Format of the tender is under review.
13	SOW	D. Implementation & Delivery (Items 20-26)	For Items 24-26 (OEM Training, Instrument Training, Software Training): (a) Will OIL provide training venue, projection, infrastructure at FHQ/PHQ/RF locations? (b) Are travel, lodging and per-diem for OIL trainees the bidder's responsibility, OIL's, or out-of-scope? (c) What is the minimum batch size below which OIL would consolidate batches?	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

14	SOW	D. Implementation & Delivery (Items 20-26)	For Item 22 (Configuration & Model Development), what is the expected scope: (a) workflow templates only, (b) workflows + asset model library + FMEA libraries + RBI/HACM model setup + AI/ML model training, or (c) full custom configuration including OIL-specific business rules and reports?	The price Bid Format of the tender is under review.
15	SOW	E. AMC - Fixed Duration Service Charge (Items 27-31)	Please define the AMC scope envelope precisely: (a) L1/L2/L3 application support, (b) infrastructure monitoring and patching, (c) preventive sensor calibration (frequency?), (d) reactive sensor / gateway replacement, (e) periodic AI model retraining, (f) integration platform health, (g) historian tag management. Which of these are inclusions vs. exclusions?	The price Bid Format of the tender is under review.
16	SOW	E. AMC - Fixed Duration Service Charge (Items 27-31)	Items 28-31 use 'notional 4000 manhours/year.' Please confirm: (a) Is the rate applicable uniformly across all skill levels (junior/senior/SME), or is a tiered rate card expected? (b) What is the minimum invoiceable unit (hour, half-day, day)? (c) Is on-site vs remote rated differently?	The price Bid Format of the tender is under review.
17	SOW	E. AMC - Fixed Duration Service Charge (Items 27-31)	Note 5.0 states 'AMC cost for 5 years should be quoted uniformly.' We read this as: Year-1 annual quarterly total = Year-2 to Year-5 notional annual value. Please confirm this interpretation, and clarify whether the 'uniform' condition applies to total cost or to per-hour/per-period rate.	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

18	SOW	F. Integration (Items 32-33)	For Item 32 (SAP S/4HANA integration), please confirm: (a) Which SAP modules are in scope - PM, MM, FICO, EAM, HR? (b) Is OIL using SAP CPI / PI/PO for integration middleware, or must the bidder provide it? (c) Does OIL have an existing ODP/CDC framework for delta extraction?	The price Bid Format of the tender is under review.
19	SOW	F. Integration (Items 32-33)	Item 32 also covers 'Condition monitoring systems.' Please name the specific CMS in use at OIL. The connector effort varies significantly by system.	The price Bid Format of the tender is under review.
20	SOW	F. Integration (Items 32-33)	For historian integration, please confirm whether OIL has existing historians at FHQ/PHQ/RF that need to be integrated alongside the new Item 3 historian, or whether the new historian replaces existing systems. If existing: name, version, tag count.	The price Bid Format of the tender is under review.
21	SOW	F. Integration (Items 32-33)	OIL operates an Asset Management Information System (AMIS). Is AMIS in scope for integration under Item 32, or is it a separate engagement? If in scope, what data flows are expected (asset hierarchy sync, work history transfer, GIS coordinates)?	The price Bid Format of the tender is under review.
22	SOW	F. Integration (Items 32-33)	Item 32 mentions 'IT data lake.' Please specify: (a) the lake technology (Azure Data Lake, Databricks, Snowflake, custom Hadoop), (b) expected direction (push from ALM to lake, or read from lake into ALM), (c) data volume and latency expectations (real-time, hourly, daily).	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

23	SOW	F. Integration (Items 32-33)	For Item 33 (Master Data Foundation): (a) What is the estimated current state quality of OIL's asset master (% duplicates, % missing attributes)? (b) Is cleansing the bidder's responsibility end-to-end, or does OIL's data team execute under bidder guidance? (c) Are the failure/damage/cause catalogs to be aligned with ISO 14224, OIL-internal taxonomy, or a hybrid?	The price Bid Format of the tender is under review.
24	SOW	G. Infrastructure (Items 34-35)	Item 34 is 'Software licensing cost (SaaS) organization-wide for 5 years.' Please confirm: (a) Is the license unlimited named users, concurrent users, or per-asset/per-tag based? (b) Does 'organization-wide' include OIL subsidiaries / JVs (NRL, OilMax) or only Oil India Limited core operations? (c) Is there an annual escalation clause, or is the rate fixed for 5 years?	The price Bid Format of the tender is under review.
25	SOW	G. Infrastructure (Items 34-35)	For internal procurement governance, can the SaaS license cost in Item 34 be broken down by module (especially for RBI, IDMS, AI Predictive Maintenance which are often standalone-purchased modules in industry)? This helps in future right-sizing if certain modules are discontinued or scaled down.	The price Bid Format of the tender is under review.
26	SOW	H. Installation & Commissioning (Items 36-38)	How many distinct sites and geographical locations does the I&C scope cover? Please share a site list with: GPS coordinates, hazardous area classification, accessibility (road/heli), local workforce availability and travel distances from nearest town.	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

27	SOW	H. Installation & Commissioning (Items 36-38)	For Item 38 (Site works: fabrication, installation, loop checks): does OIL require deployment of OEM-certified technicians, or can general industrial electricians/instrumentation technicians (Indian SI workforce) execute under bidder supervision?	The price Bid Format of the tender is under review.
28	SOW	H. Installation & Commissioning (Items 36-38)	It is assumed that OIL will handle work permits (hot work, cold work, height permits), PESO/CCOE inspections, and OISD audit clearances. Timeline for permit issuance directly impacts project schedule.	The price Bid Format of the tender is under review.
29	SOW	H. Installation & Commissioning (Items 36-38)	For Items 11 (Cables) and 37 (Accessories: JBs, glands, SS tubing): is there an OIL Standard Drawing or Material Code list to follow, or does the bidder propose? Standardisation requirements can change BOM by 20-40%.	The price Bid Format of the tender is under review.
30	SOW	I. Migration (Item 39)	Item 39 covers 'Migration of instruments from one location to another per site.' Please clarify: (a) Migration of which instruments - the sensors deployed under this contract or legacy sensors? (b) Frequency expected over 5 years (one-time or recurring)? (c) Does 'per site' mean per source site or per destination site? (d) Does it include re-calibration after migration?	The price Bid Format of the tender is under review.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

31	SOW	J. Manpower & Mobilization (Items 40-41)	For Item 40 (Implementation Manpower: PL, PM, Maintenance Engineer, Data Scientist, SME): (a) Are these on-site at OIL FHQ/PHQ/RF or remote/hybrid? (b) What is the expected on-site occupancy (manmonths per resource)? (c) Will OIL provide on-site facilities (desk, intranet access, parking)?	The price Bid Format of the tender is under review.
32	SOW	J. Manpower & Mobilization (Items 40-41)	Items 40-41 cover named resources during implementation and post-implementation. Items 28-31 cover AMC manhour rate cards. Is there an overlap window (e.g., transition from named team to AMC) or a hard handover at Go-Live? This affects whether we double-count resources.	The price Bid Format of the tender is under review.
33	SOW	Cross-Section Commercial & Contractual	For imported sensors and gateways (Yokogawa, Acoem, etc.), is OIL providing customs duty exemption / concession (e.g., under Project Import / EPCG / SEZ), or is duty borne by the bidder and included in rates?	No customs-duty exemption or concession is committed under the tender
34	SOW	Cross-Section Commercial & Contractual	For each section, please define UAT acceptance criteria and the test framework. Specifically for AI predictive maintenance (Module 5) - what is the model accuracy threshold (precision/recall/F1) at which OIL will accept the deliverable? Without defined criteria, 'AI works' is subjective.	Accuracy requirements shall first be demonstrated during implementation/UAT and subsequently during production operation. The use-case-specific validation methodology defining the ground-truth dataset, test period, sample size, exclusions, confidence methodology, baseline and revalidation frequency will be defined during Design Phase

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

35	SOW	Cross-Section Commercial & Contractual	Will OIL organise a pre-bid site visit and a clarification meeting? Bidder participation in such a visit gives much better cost accuracy and reduces risk premiums in the quoted price - to OIL's benefit.	Bidders are advised to undertake site visits in accordance with the tender provisions. OIL will facilitate access subject to operational, safety and security requirements. Detailed site information and final installation particulars will be validated during the post-award field survey and detailed-engineering stage.
36	SOW		Has there been any studies performed for Pipeline circuitization, Damanged mechanism review?	No
37	SOW		Any RBI methodology used?	As of now, following time based as per OISD standards
38	SOW		For RCM, should the solution support full RCM or baseline RCM only required?	Baseline RCM is considered
39	SOW		Mobility requirement: Web and mobile based application? Will it be inspectors/maintenance guys using app?	Role wise split of mobile application users will be shared during requirement finalization
40	SOW		OIL has IS phones, bidder is only supposed to create app for those phones.	OIL is looking for both IoS and Android
41	SOW		Pipeline: S4HANA has Linear asset management, does OIL have it?	No, OIL don't have it as of now. OIL is only looking solution for plant pipeline, not cross country pipeline.
42	SOW		What is the source of Asset depreciation data?	Finance data has to be taken from SAP i.e. Depreciation etc. and accordingly utilized by Bidder in ALM solution.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

BIDDER-H

Sl No.	Document	Tender Clause / Reference	Query	OIL's Response
1	SOW	Licensing	Please provide the number of users by role (Administrators, Asset Managers, Maintenance Planners, Supervisors, Technicians, Stores, Contractors, Management Users).	Role wise allocation of users will be shared during requirement finalization
2	SOW	Licensing	Please confirm whether user access should be based on named users or concurrent users.	The named/concurrent-user split will be finalized during requirement finalization, while organization-wide licensing for OIL shall be included.
3	SOW	Asset Scope	Please provide the total number of assets, sub-assets, locations, and linear assets to be managed in the system.	1. All equipments / assets mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
4	SOW	Asset Scope	Please provide asset count by category (Mechanical, Electrical, Instrumentation, Rotating Equipment, Pipelines, Vehicles, etc.).	1. All equipments / assets mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
5	SOW	Data Migration	What is the volume of master data to be migrated (Assets, Locations, PMs, Work Orders, Inventory, Vendors, Employees, Documents)?	Shall be reveiwed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

6	SOW	Data Migration	Are existing asset records available in structured digital format or only in documents and spreadsheets?	Shall be reviewed
7	SOW	Mobile	How many users require Mobile access?	The solution shall support approximately 200 active users.
8	SOW	Mobile	Is offline mobile functionality required for remote locations?	The solution shall provide web and mobile access, including the mobility functions specified in the SOW.
9	SOW	Predictive Maintenance	Is predictive maintenance expected for all assets or only critical equipment?	For all assets & asset types mentioned in Annexure A & Annexure B
10	SOW	Predictive Maintenance	Please identify equipment categories targeted for condition-based monitoring and predictive analytics.	1. All equipments / assets mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
11	SOW	Sensor Integration	What is the expected frequency and volume of sensor data ingestion?	The tender specifies configurable sensor publishing/measurement intervals and near-real-time ingestion through the OT Data Lake. Exact frequency, sample rate, parameter count and resulting data volume shall be finalized during detailed engineering based on equipment criticality and analytics requirements.
12	SOW	GIS	Is GIS integration mandatory? If yes, please specify GIS platform and scope.	Shall be reviewed
13	SOW	Security	Are there specific cybersecurity, CERT-In, MeitY, or data residency requirements applicable to the solution?	Shall be reviewed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

14	SOW	Support	Please confirm the required warranty and post-go-live support period.	Hardware warranty shall remain 18 months from the date of supply at OIL premises & 60 months of post go-live support period, as specified in the SOW. Tender conditions shall prevail.
15	SOW	Support	Are dedicated onsite resources required during hypercare and support phases?	Dedicated implementation resources shall be deployed as prescribed in the SOW. Hypercare shall be provided for three months after Go-Live through the core implementation team. During AMC, the bidder shall deploy the prescribed support personnel, including a permanent onsite instrumentation support engineer.
16	SOW	Project Execution	Please provide expected implementation timeline and key milestones.	Mentioned in the tender
17	SOW	Commercial	Please confirm contract duration for implementation and AMC/support.	The total contract duration is 72 months from LOA, comprising the 12-month implementation period followed by 60 months of post-Go-Live AMC/support
18	SOW	Commercial	Are there any third-party software, databases, middleware, GIS tools, or cloud subscriptions to be included by the bidder?	Shall be reviewed
19	SOW	Linear Asset Data	Please provide estimated counts and lengths of pipeline assets that require linear asset management functionality.	Contractor to assess the same during Site Visit
20	SOW		Requesting for roles of users (supervisor / manager, etc)	Role wise allocation of users will be shared during requirement finalization
21	SOW		Is OIL looking for Future maintenance or past maintenance?	Scheduled maintenance line is already there in SAP. Looking for Future perspective

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

22	SOW		data of AMIS / GIS / SAP	SAP is the master source for asset and transactional data; AMIS contributes GIS/location information.
23	SOW		What is the scope of ALM?	Please refer to tender
24	SOW		Any new asset type comes in? How will it be treated?	As of now, we are considering only the kind of assets mentioned in tender document. Any new kind of asset addition in future will be taken care later though OIL is not envisaging any new equipment set in duration of this tender
25	SOW		Accuracy expected from ALM?	Mentioned in the tender
26	General		Can vendors do a Site Visit?	Bidders are advised to undertake site visits in accordance with the tender provisions. OIL will facilitate access subject to operational, safety and security requirements. Detailed site information and final installation particulars will be validated during the post-award field survey and detailed-engineering stage.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

BIDDER-I				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	BEC	BEC/PQC Clause 3.1 (Experience Criteria), read with the GeM Bid field "Startup / MSE Relaxation for Years of Experience and Turnover = No"	Clause 3.1 requires prior experience of similar ALM/APM/EAM works executed in the Oil & Gas industry, of executed values not less than ₹12,92,43,000 / ₹8,07,77,000 / ₹6,46,21,500. The Bidder is a DPIIT-recognised Startup (Certificate No. DIPP54502) and a Micro/Small Enterprise (Udyam Registration No. UDYAMWB-10-0006392, Major Activity: Services). We request OIL to grant relaxation / exemption from the prior-experience criterion of Clause 3.1 to DPIIT-recognised Startups and MSEs, in terms of: • Rule 173(i) of the General Financial Rules (GFR), 2017, which empowers the procuring entity to relax the conditions of prior turnover and prior experience for MSEs and DPIIT-recognised Startups, subject to their meeting the quality and technical specifications; • the Public Procurement Policy for Micro & Small Enterprises (MSEs) Order, 2012 and subsequent notifications of the Ministry of MSME; and • the standard provision of this very Bid: "in case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer." Accordingly, we request OIL to (a) confirm acceptance of the exemption on evaluation of our DPIIT and Udyam credentials, and (b) enable the "Startup Relaxation" and "MSE Relaxation" flags for Years of Experience and Turnover in the GeM bid (presently "No"). Our technical capability to execute the scope will be substantiated through documentation and, if desired, a live demonstration / Proof-of-Concept.	Relaxation/Exemptions in prior turnover and prior experience conditions for Startups and MSEs is not applicable for this tender. The tender condition prevails.
2	BEC	BEC/PQC Clause 3.1 – Note A (definition of "Similar Works") and its restriction to the Oil & Gas industry	The "Similar Works" definition restricts qualifying experience to the Oil & Gas industry and to full ALM/APM/EAM-enablement projects. IoT-based monitoring, condition-monitoring and AI/ML predictive-maintenance competencies — including sensorisation of rotary equipment (pumps, motors), SCADA/telemetry data acquisition, and centralised monitoring & analytics — are directly transferable across process, utility and asset-intensive sectors. We request OIL to broaden the "Similar Works" definition to also recognise IoT / condition-monitoring, SCADA / telemetry and AI-ML predictive-maintenance / asset-monitoring deployments executed in analogous sectors — including water supply / Public Health Engineering (PHED) & utilities, power, refining & petrochemicals, fertiliser, cement, steel and general manufacturing — and to treat standalone IoT-monitoring and condition-monitoring projects (involving sensorisation of pumps/motors and centralised monitoring) as "similar." This widens competition without diluting technical rigour and is consistent with the GeM disclaimer against seeking experience "from specific organization / department / institute only."	Shall be reviewed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

3	BEC	BEC/PQC Clause 3.1 read with Clause 3.1.1 – Notes (viii)(a) and (ix) (executed value of an ongoing contract)	The Bidder is currently executing an IoT-based monitoring project of Work-Order value in excess of ₹40 Crore for a Government of West Bengal, of which an executed value of approximately ₹12 Crore has already been delivered and invoiced (supported by tax invoices and delivery challans). The project involves field sensorisation, telemetry / SCADA data acquisition and centralised monitoring — elements directly relevant to the present scope. In terms of Clause 3.1.1, Note (viii)(a) — “if the prospective bidder has executed a contract in which the requisite experience is also a component of the contract” — read with Note (ix) (executed quantum, duly certified by the end-user or a practising Chartered / Cost Accountant Firm), we request OIL to confirm that the executed and certified value of an ongoing (in-progress) contract shall be counted towards the experience criterion, and that a fully completed work / Job Completion Certificate is not a pre-condition in such a case. Further, as a DPIIT Startup / MSE and in terms of GFR Rule 173(i), we request OIL to relax the executed-value thresholds of Clause 3.1 so that the aforesaid executed & certified value qualifies. The Bidder will furnish the Work Order (with scope & value break-up) together with an end-user / CA certificate of the executed quantum and period, in lieu of a Job Completion Certificate.	Shall be reviewed
4	BEC	BEC/PQC Clause 4.1 & 4.6 (Financial Turnover)	The required annual turnover from operations is ₹8,07,77,000 in any of the last three completed financial years. We place on record that the Bidder meets this criterion on its own strength — turnover for FY 2024-25 is ₹27,03,49,000 (₹27.03 Crore) (FY 2023-24: ₹5.17 Cr; FY 2022-23: ₹3.58 Cr), certified by a practising Chartered Accountant (UDIN 25068371BMFXUT6167). We request OIL to (a) confirm that a CA-certified turnover/net-worth certificate bearing UDIN (Proforma-IX) will be accepted under Clause 4.6(a)(i); and (b) as a DPIIT Startup / MSE, and without prejudice to (a), extend the turnover relaxation under GFR Rule 173(i) as applicable. The Bidder also confirms it will furnish evidence of positive net worth (Clause 4.2) for the relevant financial year.	(a) Confirmed (b) Relaxation/Exemptions in prior turnover and prior experience conditions for Startups and MSEs is not applicable for this tender. The tender condition prevails.
5	BEC	ITB Clause 13.0(a) / BEC Clause 5.5 / GeM GTC – Bid Security (EMD) ₹46,12,000	As per ITB Clause 13.0(a) and GeM GTC, MSE units that are manufacturers of goods or Service Providers for services (other than traders) are eligible for exemption from Bid Security. The Bidder is a registered Micro/Small Enterprise providing services (Udyam Registration No. UDYAM-WB-10-0006392; Major Activity: Services). We request OIL to confirm the Bidder's exemption from submission of EMD on furnishing the valid Udyam Registration Certificate together with the Bid Security Declaration (Proforma-XV).	Confirmed

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6	SOW	SOW Clauses 3.1.7 & 4.5 (AI-Based Predictive Maintenance) and BOQ Section-C (Hardware Supply: 550 Wireless Vibration + 110 Pressure + 110 Temperature sensors)	The BOQ presently prescribes an invasive, sensor-per-machine architecture (550 wireless magnetic vibration sensors, 110 wireless pressure transmitters and 110 wireless temperature transmitters). We request OIL to make the predictive-maintenance specification outcome-based and technology-neutral, so that a noninvasive condition-monitoring and predictive-maintenance methodology — based on motor electrical-signature analysis (continuous voltage & current waveform analytics combined with model-based / AI-ML diagnostics), installed at the motor control centre (MCC) / switchroom — is treated as fully compliant / equivalent, provided it demonstrably delivers the required outcomes: • detection of mechanical unbalance / misalignment, bearing defects, foundation & transmission looseness, rotor & stator faults, cavitation and process anomalies; • equipment health scoring; remaining-useful-life (RUL) estimation and 1-month / 3-month condition forecasting; automated alerts and recommended actions; and • two-way integration with SAP S/4HANA and CMMS, historian/SCADA (read-only) and enterprise dashboards. Justification: a non-invasive approach monitors both the motor and the driven equipment from a single point in the switchroom — covering the same failure modes as vibration/temperature/pressure sensing, while additionally assessing electrical supply quality (power factor, voltage/current balance & THD) and energy wastage. It eliminates hundreds of intrusive field-mounted sensors and their cabling, hazardous-area installation permits, batteries and long-term sensor maintenance; enables far faster enterprise-wide roll-out; and delivers a materially lower total cost of ownership. Making the spec technology-neutral enhances competition and value for money, and is consistent with the GeM disclaimer against mandating a specific make/model.	Shall be reviewed
7	SOW	BOQ / SOW – request for a brand-neutral optional module (by corrigendum)	In furtherance of Query 5, we request OIL to consider incorporating, by way of a corrigendum/addendum to the BOQ, a brand-neutral optional line item / module described purely in functional terms — viz. “Non-Invasive, MCC/Switchroom-mounted, Electrical-Signature-Based Condition Monitoring & Predictive Maintenance Solution (with associated current transformers, edge processing, central/cloud analytics software and enterprise dashboards).” This would allow bidders to quote the non-invasive solution alongside the existing sensor-based scope, so that OIL can cross-verify the outputs of both approaches during implementation / a pilot, and thereafter scale enterprise-wide on the more cost-effective, easy-to-deploy technology. To remain fully compliant with GeM, we request that any such inclusion be effected through OIL's corrigendum in generic / functional language (without reference to any brand, make, model or manufacturer) and structured as a separate optional line, so as not to disturb the L-1 evaluation of the base scope.	Shall be reviewed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

8	BEC	BEC/PQC Clause 3.2 (Manufacturer Authorisation Form – MAF, ProformaXXXIII)	Clause 3.2 requires OEM authorisation for Wireless Magnetic Vibration Sensors, Wireless Pressure Transmitters and Wireless Temperature Transmitters. The Bidder is a System Integrator that procures instruments from their respective OEMs and will furnish the corresponding OEM authorisations. We request OIL to (a) confirm that OEM authorisation furnished by the Bidder as a System Integrator satisfies Clause 3.2; and (b) in the event the non-invasive methodology (Queries 5–6) is accepted, align the MAF requirement to the instruments actually supplied (e.g., the condition-monitoring unit and associated current transformers) in lieu of the three wireless sensor types.	Shall be reviewed
9	BEC	BEC/PQC Clause 11.0 (Third-Party Inspection Agency – TPIA verification)	Clause 11.0 mandates TPIA verification of BEC documents, while its Notes exempt self-declared undertakings, audited financial statements and CA certificates bearing UDIN. We request OIL to confirm that Government-issued credentials (DPIIT Recognition Certificate, Udyam Registration Certificate and GST Registration Certificate) and the CA-issued turnover / net-worth certificate (with UDIN) are exempt from TPIA verification — being independently verifiable at source — so as to avoid duplication of cost and time, particularly for Startups / MSEs.	Please be guided by the Clause No. 11.0 of the BEC regarding verification of documents by TPIA.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES**BIDDER-J**

Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	SOW	SOW 3.1.2 & 13.3	For the master data cleansing scope, please share the approximate number of Equipment and Functional Location records in S/4HANA and their current classification status.	The approximate record count and current classification status will be assessed during data discovery. The bidder shall profile, cleanse, classify and standardize the applicable equipment and functional-location records within the tendered scope.
2	SOW	SOW 3.1.6	RCM relies on failure history from SAP. Please confirm whether Catalog profiles with relevant code groups (damage/cause) are maintained cleanly for the equipment under RCM consideration.	SAP is not having failure history, the RCM module is to be built as a part of the ALM solution with all attributes pertaining to RCM.
3	SOW	SOW 3.1.8	For HACM, please confirm whether static equipment (vessels, tanks, piping, exchangers, columns) are currently classified and carries Criticality in S/4HANA EAM, or if this is to be established under this scope.	Detailed asset/circuit coverage and engineering inputs will be finalized during requirement finalization.
4	SOW	SOW 13.3	Please confirm that data cleansing is limited to standardising the data provided against an agreed design, and that correcting data defects in the source SAP system remains with OIL or is it with vendor to enrich asset data as well?	The bidder shall profile, cleanse, classify and standardize the applicable equipment and functional-location records within the tendered scope.
5	SOW	SOW 3.1.8 (RBI)	Please confirm which solution OIL is using today for RBI analysis. Is the scope to integrate with the existing RBI/IDMS system, or to build RBI capability?	OIL is presently not having RBI analysis solution, it is to be built as part of the ALM solution.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

6	SOW	SOW 3.1.1 & SCC 4.4	Clause 3.1.1 expects failure prediction even without historical failure data. Please confirm how accuracy will be measured for such assets against physics/library-based models? Is it going to be a cold start of accuracy detection?	Bidder is free to propose
7	SOW	SOW 3.1.1 & 3.1.6	AI predictive maintenance is for the ~110 sensorised assets (Annexure-A), but RCM and master data refer to thousands of assets (Annexure-B). For the non-sensorised assets, is full RCM/FMEA expected, or only Criticality and SAP-history based analytics? Please indicate the approximate count needing full RCM.	1. All equipments mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
8	SOW	SOW 3.1.3 & 3.1.4	Maintenance Order daily scheduling and load balancing described here look like native SAP RSH (Resource Scheduling) and Maintenance Planning functionality rather than APM. Please confirm whether S/4HANA process changes are expected in this engagement.	No development needed. Data to be extracted from SAP for processing in the ALM solution
9	SOW	SOW 4.4(ix)	Asset depreciation is a Finance (Asset Accounting) function handled in S/4HANA. Please confirm whether asset depreciation related S/4HANA process changes are expected in this engagement.	Finance data has to be taken from SAP i.e. Depreciation etc. and accordingly utilized by Bidder in ALM solution.
10	SOW	SOW 4.4(x)	Linear asset handling with dynamic segmentation is addressed natively by SAP LAM. Please confirm whether SAP LAM implementation is expected as part of this engagement.	The tender requires linear-asset functionality within the proposed ALM solution. A separate SAP LAM implementation is not required under this scope.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

11	SOW	SOW 3.1.5 & 4.2	Please confirm whether a separate advanced reporting/analytics tool (like SAP Analytics Cloud for reporting) is in scope?	A separate reporting or analytics product is not required under this scope. The ALM solution shall provide the dashboards, KPI engine, ad-hoc reporting, scheduling and export capabilities specified in the SOW.
12	SOW	SOW 4.4 & 5.x	Please share the list of existing Condition Monitoring systems at OIL, and confirm the complete set of source systems the solution must integrate with beyond SAP and the historian.	Detailed systems and interfaces will be shared during discovery.
13	SOW	SOW 4.5(v)	Please confirm whether OIL has an existing Data Lake for sensor/SCADA/DCS aggregation that the solution must use.	OIL's OT Data Lake is being developed as a part of a different project
14	SOW	SOW 4.5(vi)	Please confirm whether a validated tag-to-equipment/FLOC mapping exists or is to be built.	All related data is there in SAP. OIL has all the tag numbers available in SAP. Field tag no. is associated with equipment tag no. of SAP .
15	SOW	SOW module (v)/(vi), p.113	The SOW requires integration with an existing CAD module and two-way BIM/IFC integration. Please confirm the CAD and BIM systems currently in use, and the format and coverage of the drawings and IFC models OIL will provide.	At present OIL is having Auto CAD Licence but not having BIM. The solution need to have the capability to integrate as and when the need arise.
16	SOW	SOW 4.10/4.11/4.12	For Mobility, Safety (LOTO/WCM) and Warranty Management please confirm whether OIL currently uses any of these (e.g. SAP Service and Asset Manager, SAP WCM), and whether implementing them is in scope?	The bidder shall provide the complete Mobility, Safety/PTW/LOTO and Warranty Management functionality specified in the SOW and integrate applicable existing systems identified during discovery.
17	SOW	SOW 4.4 & 5.x	We estimate around 40 RICEFW in scope as per SOW, what is the number of RICEFW OIL expects in this scope?	Reports, Interfaces, Conversions, Enhancements, Forms , Workflow (RICEFW) to be as required for functionality of the SOW.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

18	SOW	SOW 4.9	Request you to share - OIL Asset Equipment Replacement Decision Workflow for asset lifecycle mapping	The available OIL Asset Equipment Replacement Decision Workflow will be shared with the successful bidder during requirement finalization. The bidder shall use it as an input and develop the comprehensive Asset Lifecycle Mapping framework required under the SOW, subject to OIL review and approval.
19	BEC	EC/PQC Clause 3.1 – Definition of Similar Work	Could you confirm that ALM/APM/EAM-enablement or AI-based Predictive Maintenance work qualifies as Similar Work even when it uses existing plant instrumentation, historians and condition monitoring systems, with no new field sensors deployed?	Shall be reviewed
20	BEC	EC/PQC Clause 3.1 – Definition of Similar Work	The bidder seeks clarification regarding the eligibility criterion for "similar work" experience. Kindly confirm whether bidders are required to demonstrate experience in all categories of similar work specified in the tender, or whether successful execution of any one of the listed categories of similar work would be sufficient to meet the eligibility requirement.	Shall be reviewed
21	SOW	SOW 3.1.2 & 13.3	Bidder requests information on number of users who will be using the solution.	The solution shall support approximately 200 active users

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

22	SOW	5.11	The clause requires the bidder to liaise with ABB/Yokogawa and ensure successful integration in the event that the existing SCADA infrastructure is insufficient to accommodate the additional ALM sensor data. Kindly clarify whether any costs associated with SCADA upgrades, additional licenses, engineering services, hardware expansion, or OEM support from ABB/Yokogawa shall be in the bidder's scope or shall be arranged and borne by OIL.	SCADA upgrade or additional SCADA licence is not in the scope.
23	SOW	5.11	The tender specifies communication through M2M SIM cards, a dedicated Private APN, and an MPLS network, and requires compatibility with the provided communication infrastructure. Kindly clarify whether the M2M SIM cards, Private APN, MPLS connectivity, and associated recurring telecom charges shall be provided by OIL or are required to be supplied and managed by the bidder. Additionally, please confirm the communication protocols and network specifications available for integration with the SCADA system.	Site-wise LTE availability will be assessed during field survey. OIL shall provide the required dual-SIM arrangement & recurring data charges to be borne by OIL

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

24	SOW	9	The tender requires all traffic to be routed through OIL's Azure Landing Zone and mandates secure IPsec connectivity and Azure AD-based SSO integration. Kindly clarify whether OIL will provide the detailed network architecture, connectivity specifications, security requirements, and integration interfaces for establishing connectivity with the Azure Landing Zone. Further, please confirm whether any Azure-side infrastructure, licenses, or recurring costs associated with the Landing Zone shall be provided by OIL, while the bidder shall only be responsible for the components within its hosted environment.	Shall be reviewed
25	SOW	10	Bidder requests clarification on the support resource deployment requirement. Please confirm whether the support resources are required to be stationed onsite at OIL locations or if they can be deployed from the bidder's office while meeting the stipulated support and SLA obligations. Further, in the event that onsite deployment is mandatory, kindly clarify whether OIL will provide lodging, boarding, and other associated facilities for the deployed personnel, or if the bidder is required to make such arrangements and include the corresponding costs in the commercial bid pricing.	Support may be delivered through an onsite/offsite model, subject to SLA requirements. However, a permanent onsite instrumentation support engineer is mandatory during the AMC period. All travel, boarding, lodging and associated personnel expenses shall be arranged and included by the bidder.
26	SOW	4.0/4.5	Is there a clean, digital log of historical failure events, maintenance records, and root-cause analyses for critical assets (e.g., Electric Submersible Pumps, gas turbines) over the past 5 to 10 years?	As ALM is being implemented for the first time no such comprehensive digital log of failure history exist.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

27	SOW	4.0/4.5	What is the historical volume of actual, documented asset failures versus normal operating hours available in the training dataset?	Available data will be provided to the successful bidder during discovery/requirement finalization. The bidder shall assess data availability and quality and perform the cleansing, mapping, preparation and model-development activities required under the SOW.
28	SOW	4.0/4.5	For assets with zero historical failure data, will the module rely entirely on unsupervised anomaly detection, or is the vendor expected to supply pre-trained physics-informed ML models?	Bidder is free to propose
29	SOW	4.0/4.5	Who is responsible for cleaning, filtering, and labeling the historical time-series data to create the training, validation, and testing datasets?	Bidder is responsible
30	SOW	4.0/4.5	Is automated model retraining (MLOps pipeline) required when process conditions change, or will model tuning be performed manually by the vendor during maintenance windows?	Automated model retraining capability to be available with option for manual model tuning .
31	SOW	4.0/4.7	What is the exact number of unique asset tags, loops, or systems included in the scope for full classical RCM versus streamlined RCM	As mentioned in Annexure B.
32	SOW	4.0/4.7	Will the operator guarantee access to complete piping and instrumentation diagrams (P&IDs), process flow diagrams (PFDs), operating manuals, and 3-to-5 years of historical work orders at project kickoff?	OIL will provide the P&IDs, PFDs, manuals, drawings and historical work-order records during discovery, subject to availability and access controls.
33	SOW	4.0/4.7	Is the vendor required to perform a preliminary Asset Criticality Ranking (ACR) to select the systems for the RCM study, or has the operator already finalized the target asset list?	ALM solution to have capability to do ACR on selected groups of equipment and carry out the RCM study.

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

34	SOW	4.0/4.11	Is the required licensing structure based on concurrent users, total registered plant personnel, or an unlimited site-wide/corporate license?	The named/concurrent-user split will be finalized during requirement finalization, while organization-wide licensing for OIL shall be included.
35	SOW	4.0/4.11	What is the average and peak volume of active permits handled daily across all target sites to ensure proper server provisioning?	Average and peak daily permit volumes will be assessed during requirement finalization
36	SOW	4.0/4.11	Will the implementation follow a phased roll-out starting with a single pilot facility, or is a simultaneous multi-site "go-live" mandated across all assets?	The implementation shall follow the timeline & milestones specified in the SOW, culminating in activation of all modules and Go-Live within the 12-month implementation period
37	BEC		Experience of 1 criteria out of 4, will that work or Bidder has to submit experience criteria for all experience in a single tender? Can a consortium member can provide experience for other works?	Shall be reviewed

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<u>BIDDER-K</u>				
Sl No.	Document	Tender Clause/Reference	Query	OIL's Response
1	Bid Document	ePBG Percentage(%)	We request for separate PBGs as below: Separate Performance Security need to be submitted for the two distinct phases of the contract, as follows: Implementation Phase: Performance Security equivalent to 5% of the Implementation contract value, to be furnished at the time of award and remain valid up to three months beyond completion of the implementation phase. AMC Phase: Performance Security equivalent to 3% of the post Implementation value (Total Contract value minus Implementation cost component), to be submitted prior to commencement of AMC services and remain valid up to three months beyond expiry of the AMC period.	Shall be reviewed
2	Forwarding Letter	Amount of Performance Security		
3	ITB	34.0 Goods And Services Tax	Please add: Any reimbursement or recovery from Company will be subjected to GST when invoiced In the event where any reimbursement or recovery is to be done from the Company, an invoice will be raised along with GST in accordance with the applicable GST laws.	These are standard GST terms adopted invariably in all tenders. Therefore, no change shall be done in this regard. Tender condition prevails.
4	BEC	3.1.2 (II) (iii)	Provided that with a view to ensure commitment and involvement of the ultimate parent/holding company sister-subsiary / co-subsiary for successful execution of the contract, the participating bidder must submit an agreement, as per format furnished vide Proforma-XXIX, between them bidder, sister-subsiary / co-subsiary and their ultimate parent/holding company, along with the technical bid. To ensure involvement of the sister subsidiary / co-subsiary from whom the bidder will borrow experience.	Suitable amendment shall be issued in this regard.
5	BEC	Notes to Para 3.1.2(I) & 3.1.2(II) above (d)	A certificate from the Statutory Auditor of the bidding company/practicing chartered accountant to establish the relationship and equity percentage holding between bidding company and the supporting company. The certificate should be duly concurred/endorsed by the Company Secretary or one of the Directors of the company concerned. The above certificate should not be more than 30 days old as on the original bid closing date.	Shall be reviewed

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

6	BEC	Notes to Para 3.1.2(I), 3.1.2(II) & 3.1.2(III) above: In case the contract is awarded based on the bid submitted as per Clause no. 3.1.2 (I)/(II)/(III) above, in order to meet the commitment from the supporting firm (Subsidiary/Parent/Sister Subsidiary company/JV Partner) based on whose technical experience the bidder has been qualified, the identified key personnel as mentioned in “Annexure-Identified Key Personnel” shall be from the supporting company for the entire implementation period. A declaration as per Proforma-XXI in this regard from to be submitted as a part of the technical bid.	Bidder requests for deletion of this clause Neither the bidder nor the supporting company will be able to provide such declaration. Bidder requests that the requirement of deploying Key Personnel from the Supporting Company be treated as not applicable to this contract, on the following grounds: 1.What is being borrowed is solution experience, not personnel experience. The purpose of Clause 3.1.2(B) is to establish that the platform/solution proposed has a demonstrated track record of successful implementation. That track record vests in the Supporting Company's product and delivery methodology, which is fully available to the bidding company as a wholly-owned entity within the same ultimate parent. The eligibility criteria under Clause 3.1A/3.1B are framed around executed projects, not around named individuals, and no personnel-specific experience is being relied upon by the bidder to establish qualification	No change is allowed. Tender condition shall prevail.
7	BEC	3.1.4 Bidders to note that “If any bidder (individual/Parent/Subsidiary/Sister Subsidiary/Co-Subsidiary/Joint Venture/Consortium) provides documents of jobs/contracts executed outside India against BEC clause no. 3.1 above, then OIL reserves the right to ask the bidder to get the aforesaid documents endorsed by Indian Embassy of the country where the job/contract was executed and it will be binding on the bidder to provide the same to OIL within stipulated time period	We request for deletion of this clause. Bidder will be submitting agreement between bidder, the supporting company and ultimate/holding company. Moreover, all documents will be TPI verified.	Shall be reviewed
8	BEC	11.4 (c) On issuance of the Inspection Certificate to the bidder, TPI agency should share a copy of the same to concerned Purchase Officer through email directly (Email ID: jintu.borah@oilindia.in). OIL will reserve the right to ask the inspection agencies to verify the documents with source, if required, at no extra cost to OIL. Verification/ Certification of documents by OIL's empanelled third party inspection agencies shall not automatically make the bidder techno commercially-acceptable or eligible for award of contract.	The TPI Certificate will be submitted by the bidder along with the bid. TPI agency will not be submitting any document to OIL.	Please be guided by the BEC Clause No. 11.4 (c).
9	GCC	13.0 CUSTOMS DUTY, IF APPLICABLE In case of import of goods, the following clause needs to be added: The Company shall arrange a certificate issued by Senior official authorised by their Board of Directors for concessional imports under notification no. 45/2025-Customs dated 24th October, 2025 (S. No.229 of Table I, List 16, and Condition No. 28), issued in supersession of Notification No. 50/2017- Customs dated 30th June, 2017 (S. No. 404 of Table, List 33, and Condition No. 48). In the event of denial of benefit to the contractor provided under notification no. 45/2025-Customs for reason not attributable to the contractor, contractor shall charge applicable customs duty on import.	The Contractor should be entitled to recover differential duty paid on account of denial of concessions by authorities wherein the fault is not attributable to the Contractor	Please be guided by the said GCC Clause No. 13.0

ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

10	GCC	15.0 Liability 15.1 Except as otherwise expressly provided herein, neither COMPANY nor its servants, agents, nominees, CONTRACTORS, or sub- CONTRACTORS shall have any liability or responsibility whatsoever to whomsoever for loss of or damage to the equipment and/or loss of or damage to the property of the CONTRACTOR and/or their CONTRACTORS or sub-CONTRACTORS, irrespective of how such loss or damage is caused and even if caused by the negligence of COMPANY and/or its servants, agent, nominees, assignees, CONTRACTORS and sub-CONTRACTORS. The CONTRACTOR shall protect, defend, indemnify and hold harmless COMPANY from and against such loss or damage and any suit, claim or expense resulting there from. 15.2 The CONTRACTOR shall protect, defend, indemnify and hold harmless COMPANY from and against such loss or damage and any suit, claim or expense resulting there from. Neither COMPANY nor its servants, agents, nominees, assignees, CONTRACTORS, sub-CONTRACTORS shall have any liability or responsibility whatsoever for injury to, illness, or death of any employee of the CONTRACTOR and/or of its CONTRACTORS or sub-CONTRACTOR irrespective of how such injury, illness or death is caused and even if caused by the negligence of COMPANY and/or its servants, agents nominees, assignees, CONTRACTORS and sub-CONTRACTORS. CONTRACTOR shall protect, defend, indemnify and hold harmless COMPANY from and against such liabilities and any suit, claim or expense resulting there from	Typo in placement of the sentence.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.
11	GCC	19.0 RISK PURCHASE Please amend as below: In the event, CONTRACTOR's failure to provide the services as per the Contractual scope, terms and conditions, COMPANY (OIL) reserves the right to hire request CONTRACTOR to remediate the services from any other source at the CONTRACTOR's risk & cost and the difference in cost shall be borne by the CONTRACTOR. Further, OIL shall retain the right of forfeiture of Performance Bank Guarantee and any other action as deemed fit. In certain operational situations OIL reserves the right to take over the site including the service equipment at the risk and cost of the CONTRACTOR.	We shall ensure service delivery in line with the terms and conditions of the contract and commits to be the sole source of remedy in case of services being performed in a manner not in conformity with the contract's requirements.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.

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12	GCC	32.0 SET-OFF Please amend as below: Any sum of money due and payable to the CONTRACTOR (including Performance Security refundable to them) under this or any other Contract, whether in progress or in future, may be appropriated by OIL and set-off against any claim of OIL (or such other person or persons contracting through OIL) for payment of a sum of money arising out of this contract or under any other contract made by the CONTRACTOR with OIL (or such other person or persons contracting through OIL) after giving 7 days prior written notice to Contractor.	If all provisions like payment due under the contract or PBG are exhausted to recover the payment due to OIL by Contractor as per Contract, then only OIL to invoke this clause. Bidder requests OIL to kindly confirm and modify the clause accordingly.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.
13	GCC	39.STATUTORY VARIATION/ NEWLY ENACTED LAW In order to factor any changes on account of adverse interpretation of law by authority, the following clause should be added: Notwithstanding anything else contained herein, if subsequent to the date of submission of Bid, any new or additional taxes and similar levies in nature and any increased in the direct cost, resulting from future legislation or interpretation of existing or future legislation, including and not limited to, goods and service tax, sales tax, customs duties, R&D cess, works contract tax, services tax, corporate tax, octroi, entry taxes etc. are imposed by Government or the concerned authorities which Contractor is bound to pay in respect of the payments received by Contractor in pursuance of this agreement, then such new/additional taxes/levies will be borne by Company. Additionally, any upward change in the rates of the existing taxes/levies shall be to the account of Company. In case of reduction or exemption from any taxes/ levies, benefit shall be passed on to the Company.	The existing clause doesn't factor any liability which arises on account of adverse interpretation of law by authorities and therefore, this addition is important.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.
14	GCC	45.0 TO DETERMINE THE CONTRACT Please amend the clause below: In such an event (i.e. termination under Article No. 44.4 to 44.9 44.8 above), the contract shall stand terminated and shall cease to be in force from the date of such notification by the COMPANY. Thereafter the CONTRACTOR shall stop forthwith any of the work then in progress, except those work which the COMPANY may, in writing, require to be done to safeguard any property or work, or installations from damages, and the COMPANY may take over the remaining unfinished work of the CONTRACTOR and complete the same Services through a fresh CONTRACTOR or by other means, at the risk and cost of the CONTRACTOR, and any of its sureties if any, shall be liable to the COMPANY for any excess cost occasioned by such work having to be so taken over and completed by the COMPANY provided that such excess cost shall be limited to 50% of the cost of defaulted work mentioned in the Contract over and above the cost at the rate/cost specified in the schedule of quantities and rates/prices.	Since 44.9 is for termination for OIL's convenience, Bidder requests removal from this provision. Contractor cannot take risk in such cases. The excess liability to be limited to 50% of the cost of such defaulted work mentioned in the Contract.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.

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15	GCC	46.0 WITHOUT DETERMINING THE CONTRACT Please amend the clause below: In such an event (i.e. termination under Article No. 44.4 to 44.9 44.8 above), the COMPANY may take over the work of the CONTRACTOR or any part thereof and complete the same Services through a fresh CONTRACTOR or by other means, at the risk and cost of the CONTRACTOR. The CONTRACTOR and any of its sureties are liable to the COMPANY for any excess cost provided that such excess cost shall be limited to 50% of the cost of defaulted work mentioned in the Contract over and above the cost at the rates specified in the schedule of quantities and rates/prices, occasioned by such work having been taken over and completed by the COMPANY.	Since 44.9 is for termination for OIL's convenience, Bidder requests removal from this provision. Hiring of any other party cannot be at the "risk" of the Contractor. Contractor's liability to be capped	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.
16	SCC	1.4 GCC Cl. No. 27.0 Terms of Payment	AMC (Section-J under PART-II of the BOQ) and all the Quarterly Monthly payments will be released after completion of the quarters months after deduction of penalty (if any) post go-live and completion of hyper care period.	The 20% minimum AMC threshold shall be calculated on the total Offer Price including GST. If the five-year AMC price is below 20%, the differential amount will be withheld proportionately from eligible invoices and released after successful contract completion, subject to satisfactory performance.
17	SCC	1.10 GCC Clause No. 10.0 Performance Security	We request for separate PBGs as below: Separate Performance Security need to be submitted for the two distinct phases of the contract, as follows: Implementation Phase: Performance Security equivalent to 5% of the Implementation contract value, to be furnished at the time of award and remain valid up to three months beyond completion of the implementation phase. AMC Phase: Performance Security equivalent to 3% of the post Implementation value (Total Contract value minus Implementation cost component), to be submitted prior to commencement of AMC services and remain valid up to three months beyond expiry of the AMC period.	Shall be reviewed
18	SCC	14.1 Insurance Please amend the clause below: CONTRACTOR at all times during the currency of the contract shall provide, pay for and maintain the following insurance coverage: Employees Compensation (EC) Policy Workmen Compensation or Employer's Liability Policy insurance : As required by the laws of the country of origin of the employee.	We request this insurance to be applicable as per the applicable laws of the contract. In the Employees Compensation Act, there is no mention that a foreign national can comply with the rules of his/her country and need not comply with the laws of India/EC Act. The requirement in this clause is in contravention of the EC Act. Hence, we request OIL to kindly amend this requirement.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.

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19	SCC	14.1 a) Please delete the clause below: a)The Contractor shall, at his own expense, arrange appropriate comprehensive insurance (All-risks insurance cover with suitable limit as per International Standard) to cover all risks assumed by the Contractor under this Contract in respect of its equipment, tools including but not limited to well equipment & tools, any other belongings and personnel during the entire period of this Contract including extensions thereof.	Bidder requests deletion of this provision as it is not relevant for scope envisaged in this tender.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
20	SCC	14.1 b) Please amend as below: b) The Contractor shall also carry adequate insurance cover against damage/loss to third party/person/property to cover its liabilities under Contract.	We request this addition for clarity as contractor shall have insurance to cover its liabilities only.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
21	SCC	14.1 c) Please delete the entire clause below: c) The Contractor at his cost shall arrange, secure and maintain insurance as may be necessary and to its full value for all such amounts to protect the works-in-progress from time to time and the interest of Company against all risks as detailed herein subject to the satisfaction of the Company and irrespective of acceptance of the Work.	We request deletion of this requirement as the type of services to be provided under this contract is not something can be covered for “work in progress”.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.

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22	SCC	14.5 Waiver of subrogation Please amend the clause below: Except for the Workmen's Compensation / Employer's Liability Insurance for workmen engaged under this contract which have been obtained by the Contractor as their corporate policy/rules, where OIL is neither required to be present as principal assured or additional assured, all insurance policies of the Contractor and its Sub-Contractor with respect to the operations conducted hereunder as set forth in clauses hereof, shall be endorsed by the underwriter in accordance with the following policy wording: "The insurers hereby waive their rights of subrogation against Oil India Limited or any of their employees or their affiliates and assignees to the extent of the indemnities undertaken by the Contractor under this Contract."	Bidder requests this change since waiver of subrogation will be to the extent of indemnities assumed by the Contractor under the contract. This clause was amended in multiple tenders/contracts for OIL including: ☐ Tender No. GEM/2023/B/3923542 for Hiring of Services for upgradation of hardware and infrastructure of High-Performance Computing Centre (HPCC) at Geophysics Department of OIL ☐ Contract No. 6118193 for hiring of cementing services, ☐ Contract No. 6118087 for hiring of wireline services in OALP Block, ☐ Tender No. DCG3015S23 for Hiring of Pulsar Services, ☐ Tender No. CDG7411L22 for Hiring of 03 (Three) Nos. Wireline Logging Units with Services.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
23	SCC	14.6 Loss Payee Clause Delete and mark as "Not Used"	Bidder requests deletion of this provision as it is not relevant for scope envisaged in this tender. This has been agreed by OIL in all contracts including: ☐ Tender No. GEM/2023/B/3923542 for Hiring of Services for upgradation of hardware and infrastructure of High-Performance Computing Centre (HPCC) at Geophysics Department of OIL ☐ Contract No. 6118193 for hiring of cementing services ☐ Contract No. 6118087 for hiring of wireline services in OALP Block - Tender No. DCG3015S23 for Hiring of Pulsar Services	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
24	SCC	14.7 Additional Assured Please amend the clause below: "Oil India Limited" is to be included as Additional Assured named as Additional Insured in the Insurance Policies (except in case of Workmen Compensation/Employer's Liability insurance) to the extent of the indemnities undertaken by Contractor under this Contract.	Proposed change to align with 14.12 i) Additional Assured status shall be to the extent of liabilities of Contractor under the Contract only.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.

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25	SCC	14.12 ii) Commercial General Liability Insurance Delete and mark as "Not Used"	The scope of work for this present tender is not well site services, hence this insurance is not applicable. This has been agreed by OIL in all contracts including: ☐ Contract No. 6117171 for AMC of Petrel Geoscientific Software ☐ Contract No. 6117480 for AMC of Techlog Software	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
26	SCC	14.12 iii) Comprehensive General Automotive Liability Delete and mark as "Not Used"	The scope of work for this present tender is not well site services, hence this insurance is not applicable.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
27	SCC	14.12 iv) Carrier's Legal Liability Insurance Delete and mark as "Not Used"	The scope of work for this present tender is not well site services, hence this insurance is not applicable. This has been agreed by OIL in all contracts including: ☐ Contract No. 6117171 for AMC of Petrel Geoscientific Software Contract No. 6117480 for AMC of Techlog Software	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.
28	SCC	14.12 vi) Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) Request OIL to clarify that this will apply only for contract labour and will not apply for Contractor's employees.	We will not be using any contractors for the purpose of this Scope of Work. Accordingly, we request OIL to please delete the obligation to maintain this insurance as mentioned in SCC. This has been agreed by OIL in all contracts including: ☐ Contract No. 6117171 for AMC of Petrel Geoscientific Software ☐ Contract No. 6117480 for AMC of Techlog Software	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable. Moreover, please refer to Clause no. 1.12 of SCC for any other insurance related requirements. Whenever there is a conflict, the provisions of the SCC Shall prevail over those in the GCC.

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29	SCC	Limitation of Liability (%) Notwithstanding any other provisions incorporated elsewhere in the contract, the aggregate liability of the CONTRACTOR in respect of this contract, whether under Contract, in tort or otherwise, shall not exceed 100% of the Contract Price (if not specified otherwise in SCC), provided however that this limitation shall not apply to the cost of repairing or replacing defective equipment by the CONTRACTOR, or to any obligation of the CONTRACTOR to indemnify the COMPANY with respect to Intellectual Property Rights.	Considering that this clause is similar to Clause 16(b) of the GCC, the bidder requests confirmation that GCC Clauses 16(a) and 16(c) remain valid.	Please note that the GCC is a standard contractual document, and any change or deviation from the same is not acceptable.
30	SCC	Intellectual Property Rights (New Clause) Please add this new clause below : While providing the goods/services to Company, Contractor may utilize expertise, know-how and other intellectual capital (including intellectual property) and develop additional expertise, know-how and other intellectual capital (including intellectual property) which are the Contractor's exclusive property and which Contractor may freely utilize in providing goods/services for its customers. Except where expressly and specifically indicated in writing and in exchange for appropriate agreed payment, Contractor does not develop any intellectual property for ownership by OIL. Contractor retains sole ownership of any such intellectual capital (including intellectual property) created by Contractor during the course of providing the goods/Services. Contractor grants no title, license or right to OIL to use Contractor Group's intellectual capital (including intellectual property).	We request OIL to please replace this clause with the standard clause on Intellectual Property Ownership. This clause was agreed in multiple contracts including: ☐ Tender No. GEM/2023/B/3923542 for Hiring of Services for upgradation of hardware and infrastructure of High-Performance Computing Centre (HPCC) at Geophysics Department of OIL ☐ Contract No. 6116940 dated 10 May 2022 ☐ Contract No. 6116167 dated 2 May 2022 ☐ Contract No. 6118193 for hiring of cementing services ☐ Contract No. 6118087 for hiring of wireline services in OALP Block	Shall be reviewed
31	SCC	Patent Indemnity (New Clause) Please add this new clause below: Contractor shall not be liable for any intellectual property infringement due to: (a) specific modification or design of Contractor's goods or services to meet OIL's specifications, (b) combination of Contractor's goods or services in combination of other products and/or services not recommended by Contractor, (c) out of unauthorized additions or modifications to Contractor goods by OIL, or (d) OIL's use of Contractor's goods or services that does not correspond to Contractor's published standards or specifications; in which case, OIL shall indemnify and hold Contractor harmless from any claims.	While Bidder agrees to indemnify OIL for IP Infringement, Bidder will not be able to indemnify OIL for IP Infringement in certain exceptional cases. We request OIL to please add these standard exclusions for IP Infringement. This has been agreed by OIL in several POs including: ☐ Tender No. GEM/2023/B/3923542 for Hiring of Services for upgradation of hardware and infrastructure of High-Performance Computing Centre (HPCC) at Geophysics Department of OIL ☐ Contract No. 6118087 for Hiring of Wireline Services for exploratory drilling in OALP blocks ☐ Contract No. 6118193 for hiring of cementing services	Not acceptable. Tender condition prevails.

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32	SCC	Data Liability (New Clause) Please add the following new clause: Company shall at all times be responsible for the product(s) provided by Company and for providing back up for all and data files. It is clearly understood that Contractor has no liability for loss, damage, or destruction to any Company data, except in the case of intentional misconduct, in which case Contractor's sole liability is limited to reloading the data from the most recent database back-up. In no event shall Contractor ever be liable for reacquiring Company's data.	We request OIL to please add this clause on Data Liability considering the scope of work. This has been agreed by OIL in several POs/tenders including: □GEM/2024/B/5560778 for Hiring of Consultants, □GEM/2023/B/4362014 for Hiring of Consultancy Services for Basin Modelling Study GEM/2023/B/4200591 for Hiring of Consultancy Services to carry out G&G Studies pertaining to Offshore Andaman and Nicobar Basin	Not acceptable. Tender condition prevails.
33	SCC	Reliance on Data (New Clause) Please add this new clause below: Notwithstanding anything to the contrary in the Contract, interpretation, recommendations and / or well or reservoir descriptions, deliverables and decisions may involve information and data furnished by OIL, the accuracy and reliability of which are not the responsibility of Contractor. Under no circumstances should OIL treat or rely upon the use of the software/goods/services or any deliverable as the sole basis for any decision, be it operational, technical, financial, commercial or otherwise, related to the wellbore, the reservoir or the field, including but not limited to any decisions related to well planning, drilling safety and performance, field development, well control, production optimization, contingency planning and infrastructure and systems design and optimization. Therefore, for the avoidance of doubt, Contractor does not provide warranty for the accuracy, correctness or completeness of deliverables, and OIL takes full responsibility for any decisions taken by OIL based on all interpretations, recommendations, deliverable and / or well or reservoir descriptions.	We request inclusion of this clause as this is an industry recognized standard. Bidder provides services based on good judgement and cannot guarantee the utter accuracy of any data or interpretation thereof.	Not acceptable. Tender condition prevails.
34	SCC	Import and Export Control (New Clause) Please add the new clause below: Both Parties shall strictly comply with, and adhere to, all applicable U.S. and non-U.S. laws and regulations pertaining to economic sanctions laws, trade, import and export control. In the event that at the time when this Contract comes to existence or any moment thereafter, any trade compliance laws, regulations or restrictions of any kind, substantially adversely affect the performance of Parties or their affiliated companies under the Contract, the Parties shall seek in good faith to find a mutually acceptable solution to minimize such adverse effects. In the absence of a mutually acceptable solution, each Party, reserves the right to terminate the Contract, and the other Party agrees that it shall not be considered a breach of this Contract and hence it shall have no legal cause of action, and hereby waives any right to assert the same.	We request addition of this clause to ensure compliance to the respective trade control and sanction and to avoid both criminal and civil liability.	Not acceptable. Tender condition prevails.

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35	SCC	Subscription License (New Clause) Please add this new clause below: OIL's right to use the version of the Software licensed and delivered to OIL is subscription and begins when Seller delivers the Software to OIL in the manner indicated in the Quotation. OIL may continue to use the Software as long as OIL abides by the terms and conditions of this Contract. If OIL violates the terms and conditions of this Contract, this license immediately expire and OIL must discontinue OIL'S use of the Software and immediately remove, return or destroy, at Seller's option, all copies of the Software and all of the related documentation.	We request OIL to please add this clause on nature of software license. import and export compliance. This clause has been agreed by OIL in previous Contracts and POs as below: □PO 7913514/DFD/L6 dated 25 July 2024 □PO 7951342/DFD/L6 dated 2 November 2021 □PO 7951330/SJG dated 16 August 2021 □PO 7951330/SJG dated 16 August 2021	Not acceptable. Tender condition prevails.
36	SCC	Non-Exclusive/ Non-Transferable (New Clause) Please add the new clause below: The Software is licensed, and not sold, to OIL on a non-exclusive, non-transferable basis. This Contract only gives OIL rights to use the Software for OIL's own internal business operations. OIL may use the Software only as expressly granted to OIL in this Contract, and Seller reserves all other rights that are not specifically granted to OIL.	We request OIL to please include this standard clause for licensing. This clause has been agreed by OIL in previous POs as below: □PO 7913514/DFD/L6 dated 25 July 2024 □PO 7911964/LCP dated 29 April 2022 □PO 7951342/DFD/L6 dated 2 November 2021 □PO 7951330/SJG dated 16 August 2021	Not acceptable. Tender condition prevails.
37	SCC	Software Warranty (New Clause) Please add this new clause below: The software warranty cover is subject to OIL follows the instructions and operates the software on computer systems that comply with Seller's published technical specifications, Seller warrants that during the term of the warranty period, the Software will perform as described in the Seller's Documentation that OIL receive in or with the Software. Seller does not provide any warranty for Software that has not been properly licensed.	We request OIL to please add this clause on software warranty. import and export compliance. This clause has been agreed by OIL in previous Contracts and POs as below: □PO 7913514/DFD/L6 dated 25 July 2024 □PO 7951342/DFD/L6 dated 2 November 2021 □PO 7951330/SJG dated 16 August 2021	Not acceptable. Tender condition prevails.
38	SCC	Limited Warranty (New Clause) Please add this new clause below: The Seller's sole responsibility under these warranties will be to provide the goods / equipment / Software, Maintenance and/or Services described in the Contract with OIL. Warranties do not apply to : (a) any goods other than goods / Software listed in the Contract, or (b) conditions resulting from improper use or storage of the goods or operation of the goods outside the specified environmental conditions; or (c) conditions resulting from causes external to the goods /Software after delivery;' or (d) conditions resulting from modifications to the goods / Software other than modifications made by Seller or Seller's service vendor; or (e) conditions resulting from movement of the goods /Software; or (f) goods /Software from which Seller's or Seller's service vendor's serial numbers have been removed.	We request OIL to please add this clause on limited warranty. import and export compliance. This clause has been agreed by OIL in previous Contracts and POs as below: □PO 7913514/DFD/L6 dated 25 July 2024 □PO 7951342/DFD/L6 dated 2 November 2021 □PO 7951330/SJG dated 16 August 2021	Not acceptable. Tender condition prevails.

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		Limitation of License (New clause) Please add this new clause below: OIL is not authorized any may not authorize anyone else to do any of the following: (a) Obtain unauthorized access to the Software, for example, by bypassing security features, including but not limited to license control features that limit or record the number of users, in or for the Software; (b) Reverse engineer, decompile or disassemble the Software except and only to the extent required by law; (c) Make more copies of the Software than specified in the Contract; (d) Publish the Software; (e) Develop or create modifications, improvements and/or derivative works of the Software; (f) Display the Software in any manner except as provided herein; (g) Rent, lease, lend, sub-license or otherwise distribute or assign OIL'S rights in the Software, including but not limited to assigning or sub-licensing OIL'S rights to use the Software to third parties without Seller's prior written consent, (h) Separate out or use any portion of embedded Software for any purpose such as commercial or competitive analysis of Seller's Software; (i) Transfer the Software from the Geographic Unit of first delivery without notifying Seller and paying any related charges associated with a license transfer or access; or (j) Deliberately modify or disable or otherwise "crack" any feature incorporated in the Software, including those that are intended to prevent access to unlicensed software.		
39	SCC		We request OIL to please add this clause on limitations of license, import and export compliance. This clause has been agreed by OIL in previous Contracts and POs as below: □ PO 7913514/DFD/L6 dated 25 July 2024 □ PO 7951342/DFD/L6 dated 2 November 2021 □ PO 7951330/SJG dated 16 August 2021	Not acceptable. Tender condition prevails.
40	SCC	Cybersecurity (New clause) Please add this new clause below: Security Incident: For the purpose of this clause, Security Incident means any actual damage to the integrity or security of: (i) the online services available to OIL under this contract; or (ii) the infrastructure or systems on which the services operate or rely upon. A Security Incident includes a Personal Data Breach and any other unlawful or unauthorized access to any data resulting in loss, disclosure, or alteration of the data. OIL must promptly notify Contractor and maintain as confidential any information about: (i) any possible Security Incident caused by the act or omission of OIL and/or a User; (ii) any security vulnerability of the Online Services discovered by OIL and/or a User; and/or (iii) any suspected misuse of the Online Services by OIL and/or a User. Contractor provides the Online Services in accordance with its Privacy Notice (http://www.slb.com/about/privacy.aspx), including the data protection addendum contained therein, and the applicable		Not acceptable. Tender condition prevails.

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		security standards set out at: https://www.software.slb.com/slb-online-services-security. If there is a Security Incident affecting OIL Data: Contractor will notify OIL about the Security Incident without undue delay upon becoming aware; Contractor may immediately suspend the Online Services, or Users' access without notice and for as long as Contractor, acting reasonably, deems necessary; and Contractor may adjust OIL's fees to account for an interruption to the Online Services, provided that the Security Incident was unrelated to OIL's or Users' acts or omissions. OIL will indemnify, defend, and hold harmless Contractor and its Affiliates, officers, directors, employees, successors, and assigns, from and against any and all losses incurred in connection with any claim, suit, action, or proceeding that arises out of or relates to any Security Incident.		
41	SOR	Pg 275 Proforma XXI Delete and mark as "Not Used"	We request OIL to delete as it will not be possible for the bidder to submit such declaration.	Not acceptable.
42	SCC		The Bidder requests that these T&Cs be marked as "Not Applicable" to avoid duplication and inconsistencies with the SLA set out in Section III (SCC).	Query mentioned is not clear
43	SOW	SOW Clause 3.1.3	Who is the designated approving authority for the daily maintenance schedule, and is a multi-level workflow approval required before release?	Approving authority and approval levels will be finalized during workflow design.
44	SOW	SOW Clause 3.1.3	On approval of the schedule within the ALM solution, should the corresponding Maintenance Orders be automatically released in SAP S/4HANA, or shall release remain a manual action within SAP?	Approved schedules shall release orders to designated resources; SAP remains the transactional system. Exact automatic-release controls will be designed with OIL.
45	SOW	SOW Clause 3.1.3	Should schedule changes made in ALM automatically create scheduling confirmations in SAP S/4HANA, or shall they be routed through a separate approval before write-back? Bidder understands write-back will be permitted only through OIL-approved BAPIs/APIs.	Write-back shall occur only through approved SAP APIs/BAPIs and controlled approval mechanisms.
46	SOW	SOW Clause 3.1.3	What is the expected scheduling horizon (in weeks/months) to be configured in the solution?	No fixed scheduling horizon is prescribed; it must be configurable and finalized during design.
47	SOW	SOW Clause 3.1.3 / 3.1.4	How is resource capacity to be calculated — through availability calendars, shift patterns, skill-based capacity or otherwise? Please confirm the basis to be configured.	Capacity shall support daily availability, calendars, shifts, skills and resource constraints, finalized with OIL.
48	SOW	SOW Clause 3.1.3 / 3.1.4	Will resource availability be sourced from SAP HR / SuccessFactors or from a separate workforce management system? Please confirm the source system and the integration method to be adopted.	The workforce source system is not specified. SAP or another identified system will be integrated during design.
49	SOW	SOW Clause 3.1.3 / 3.1.4	Are contractor and third-party resources to be included in the resource pool for scheduling and load balancing?	Internal and external /contractor resources associated with work orders should be supported.

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50	SOW	SOW Clause 3.1.3	What specifically constitutes “failure to initiate the maintenance order” — non-commencement against planned start date, non-confirmation in SAP, or another defined trigger? Further, after what elapsed duration should the alarm be generated, and who are the designated recipients of the email notification?	“Failure to initiate” means non-initiation against the approved schedule. Alarm timing and recipients will be configured with the concerned maintenance department.
51	SOW	SOW Clause 3.1.4	Is the requirement limited to a visual capacity-balancing interface with manual drag-and-drop, or is the solution additionally expected to auto-suggest alternate schedule dates?	Both drag-and-drop balancing and AI-based alternate scheduling/intervention recommendations are required.
52	SOW	SOW Clause 3.1.4	Can load balancing be carried out across departments/sections, or is it to remain restricted within a single department?	Cross-department balancing is not expressly defined and will be finalized during design.
53	SOW	SOW Clause 3.1.4	How should emergency and breakdown maintenance orders be treated in load balancing — are they permitted to override available capacity constraints?	Emergency/breakdown orders should be priority-driven, but override rules require OIL approval.
54	SOW	SOW Clause 3.1.2 / 4.2	Where asset data differs between SAP S/4HANA and AMIS, which system shall be treated as the master source of truth for the ALM solution?	SAP is the master source for asset and transactional data; AMIS contributes GIS/location information.
55	SOW	SOW Clause 3.1.2	Will all asset, maintenance, materials, purchasing and cost data be sourced exclusively from SAP S/4HANA, or are additional source systems within scope of integration?	SAP is primary, but AMIS, condition-monitoring systems, historian, OT Data Lake, GIS/CAD/BIM and other systems are also in scope.
56	SOW	SOW Clause 3.1.2 / Annexure-A & B	Are complete and validated asset hierarchies (functional location → equipment → component) already available in SAP for the assets listed in Annexure-A and Annexure-B?	Existing hierarchy completeness is not confirmed. The bidder must assess, cleanse and complete it.
57	SOW	SOW Clause 3.1.2 / 4.2	Should asset hierarchies be editable within the ALM solution, or maintained strictly read-only with SAP retained as the system of record?	SAP remains system of record. ALM may structure analytical representations, but transactional hierarchy changes must follow approved SAP integration
58	SOW	SOW Clause 3.1.1 / Annexure-A & B	Beyond the asset classes listed in Annexure-A and Annexure-B, are any further asset classes required to be supported during the contract period?	Annexures A/B define the tendered scope. No additional classes are presently specified.
59	SOW	SOW Clause 3.1.2	How is asset criticality to be determined — will OIL provide a pre-defined criticality classification, or is the solution expected to compute criticality? If computed, please share the criteria and weightages.	The bidder shall configure criticality using safety, environmental, operational and financial consequence criteria. Final scales and weightages require OIL approval.
60	SOW	SOW Clause 3.1.2	Will master data quality and failure coding standards (e.g. ISO 14224 catalogues) already exist in SAP, or is data cleansing, de-duplication and standardisation within the bidder’s scope? Bidder’s understanding is that OIL shall provide cleansed and validated master data.	All data activities to be done for ALM solution are in Bidder’s scope. Existing SAP Data has to be replicated in ALM. Any future data has to be same in ALM & SAP
61	SOW	SOW Clause 3.1.2 / 4.9	Should lifecycle stages be user-configurable, or fixed to the stages defined in the OIL Asset Equipment Replacement Decision Workflow?	Lifecycle stages shall be configurable while aligning with OIL’s Asset Equipment Replacement Decision Workflow.
62	SOW	SOW Clause 4.9	What events trigger a lifecycle stage change — SAP status change, manual user action, or condition/analytics-based trigger?	Stage changes may be triggered by SAP status, approved manual action or configured analytics/end-of-life rules.

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63	SOW	SOW Clause 4.9	Is an approval workflow required for lifecycle stage transitions? If yes, please indicate the number of approval levels.	Lifecycle transitions require configurable approval workflows; the number of levels will be finalized during design.
64	SOW	SOW Clause 3.1.2 / 3.9	Please confirm the complete list of SAP objects to be synchronised (equipment master, functional location, notification, maintenance order, PR/PO, cost centre, material master, HR/resource data).	Expected objects include equipment, functional locations, notifications, maintenance orders, materials, PR/PO, costs, meters, failure codes and relevant resource data. Final object list will be agreed during design.
65	SOW	SOW Clause 3.9 (Obligations of OIL)	Will OIL provide the standard SAP APIs/BAPIs/OData services, together with sandbox and QA environments and the requisite SAP interface licences? Bidder's understanding is that SAP-side interface development and licensing rests with OIL.	OIL will provide applicable SAP integration licences and access. Bidder-side adapters, connectors, mappings and effort remain bidder scope.
66	SOW	SOW Clause 3.1.2 / 5.11	Is integration expected to be real-time, near-real-time or scheduled batch? Please indicate the acceptable latency for each object class.	Integration may be real-time, near-real-time or batch according to the object. Exact latency will be finalized during design.
67	SOW	SOW Clause 3.1.9	Should KPI calculations follow OIL-specific formulas (to be provided by OIL) or industry-standard definitions?	Industry-standard KPIs shall be supplied and configured to OIL-approved definitions.
68	SOW	SOW Clause 3.1.9	What is the expected refresh frequency for MTBF, MTTR, MTBR, availability and other reliability KPIs?	KPI refresh shall support real-time or scheduled calculation according to the data source and business need; exact frequency will be finalized.
69	SOW	SOW Clause 3.1.9	What historical period is to be considered for KPI, reliability and trend analysis?	No fixed historical period is prescribed; available historical data will be assessed during discovery.
70	SOW	SOW Clause 3.1.9	Which BI/reporting tools are presently in use at OIL, and is the ALM solution expected to integrate with them or to provide native reporting and dashboards?	None. Native ALM reporting is mandatory.
71	SOW	SOW Clause 3.1.9	Please indicate the expected number of custom reports and dashboards to be developed, so that the effort and cost may be firmed up. Bidder proposes that reports beyond the agreed count be handled through the change control mechanism.	The bidder shall configure all dashboards, reports, KPIs and visualizations required to meet the SOW. The detailed role-wise inventory, layouts, thresholds and priorities will be finalized during requirement finalization without additional commercial impact for the tendered scope.
72	SOW	SOW Clause 3.1.6 / 4.7	Does OIL have an existing RCM methodology, template or internal standard which the solution is required to follow?	No
73	SOW	SOW Clause 3.1.6 / 4.7	Are existing FMEA / Failure Consequence Analysis (FCA) studies available for the assets listed in Annexure-A and Annexure-B?	As ALM is being implemented for the first time , no FCA exist.

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74	SOW	SOW Clause 3.1.6	Bidder's understanding is that the ALM solution shall analyse existing failure, maintenance and strategy data available in SAP, and that fresh field-level RCM studies, facilitated workshops or FMEA development exercises are not within scope. Please confirm.	As ALM is being implemented for the first time , no FCA exist. And there is no FCA in SAP.
75	SOW	SOW Clause 3.1.6	Should RCM outputs and revised maintenance strategy recommendations be written back to SAP, or retained within ALM for review and manual adoption?	Approved strategy and criticality updates shall support controlled SAP write-back through APIs/BAPIs.
76	SOW	SOW Clause 3.1.6 / 4.7	Which risk scoring model is to be adopted, and is an approved OIL risk matrix available for configuration in the solution?	To be a part of the developed solution.
77	SOW	SOW Clause 4.7	Are the safety, environmental, production and financial consequence dimensions to be weighted equally, or will OIL provide the applicable weightages?	Weightages are configurable and will be finalized during requirement finalization.
78	SOW	SOW Clause 4.7	Should Failure Consequence Analysis (FCA) results require an approval workflow before they are actioned?	FCA results will require approval workflow before they are actioned.
79	SOW	SOW Clause 3.1.7 / 4.5	Which asset categories are to be treated as critical and taken up in the first phase of predictive maintenance implementation?	1. All equipments mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
80	SOW	SOW Clause 3.1.7 / 4.5	What prediction horizon is expected from the failure prediction models (e.g. 7, 15 or 30 days in advance)?	No common prediction horizon is prescribed. Configurable RUL and warning horizons are required.
81	SOW	SOW Clause 3.1.7 / 4.5	Is model training expected to be performed within the ALM solution itself, or on an external AI/ML platform to be provided by OIL?	Within ALM Solution itself
82	SOW	SOW Clause 3.1.7 / SLA Clause 4.4	What is the minimum acceptable prediction accuracy or performance target, how will accuracy be measured, and over what evaluation window? Bidder submits that accuracy commitments can be firmed up only after data quality assessment and baselining during the implementation phase, and requests that SLA linked to tool accuracy be applied only after a mutually agreed baselining period.	As mentioned in the SOW
83	SOW	SOW Clause 3.1.7 / 13.3	Will OIL provide historical failure and maintenance data for model training? If yes, please indicate the period available (e.g. 3, 5 or 10 years) and the format of extraction.	Available historical data will be provided, but no guaranteed period or format is specified.
84	SOW	SOW Clause 3.1.2	How many years of historical maintenance and failure records are required to be migrated into the ALM analytical repository?	As ALM is being implemented for the first time historical maintenance and failure records is available in the digital form for only for a few equipment.

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85	SOW	SOW Clause 3.1.2	Who shall be responsible for data cleansing prior to migration — OIL or the bidder? Bidder's understanding is that source data cleansing and validation rests with OIL.	It is the Bidders responsibility for data cleansing prior to migration.
86	SOW	SOW Clause 3.1.2 / 3.9	Will OIL provide data mapping documents, data dictionaries and field-level definitions for the source systems?	Data as available for the equipment will be provided. Though data mapping do not presently exist
87	SOW	SOW Clause 3.1.2	What is the expected volume of records to be migrated, so that the migration effort may be sized appropriately?	What ever data presently exist with OIL for the equipment mentioned in Annexure B
88	SOW	SOW Clause 6.0 / 18.2 / Annexure-A	Please confirm the final quantities of vibration, pressure and temperature sensors, as the Hardware BOQ quantities are to be reconciled against the measurement points indicated for the assets in Annexure-A.	To be reviewed
89	SOW	SOW Clause 13.2 / 14.0	Are all identified sensor installation locations readily accessible, or will access platforms, scaffolding or working-at-height arrangements be required at any location? Please confirm whether such arrangements are within OIL's scope.	To be assessed during site visit. All arrangement for Sensor installation is in Bidders scope.
90	SOW	SOW Clause 13.2 / 14.0	What downtime and shutdown windows will be made available for sensor installation, and will OIL provide the shutdown clearance and hot work permits?	OIL will provide the needful shutdown as per operational convenience which need to planned befoehand.
91	SOW	SOW Clause 18.1 (Sl. No. 2)	Which historian platform is presently deployed at OIL? Is the 50,000-tag historian included in the Software BOQ intended as a new deployment, or as an extension of the existing historian?	To be reviewed
92	SOW	SOW Clause 5.11	What OT Data Lake technology/platform is being implemented by OIL, and what interface (API, streaming, message broker) will be exposed to the ALM solution for consumption?	to be reviewed
93	SOW	SOW Clause 5.11 / 6.0	Which SCADA/DCS systems are presently deployed, and will read-only OPC-UA access be extended to the ALM solution? Bidder's understanding is that no write access to SCADA is required or permitted.	SCADA systems presently employed are ABB & Yokogawa
94	SOW	SOW Clause 3.1.7	Should predictive alerts automatically create SAP Notifications and/or Maintenance Orders, and what approval process is required before automatic order creation?	It shall have an approval workflow.
95	SOW	SOW Clause 3.1.8 / 4.8	Is Risk Based Inspection (RBI) presently implemented in OIL? If so, on which platform, and is integration with the same required?	RBI is being implemented as part of ALM for the first time.
96	SOW	SOW Clause 3.1.8 / 4.8	Will historical inspection and thickness measurement data be provided in electronic form for HACM implementation? Please indicate the format and period available.	Available inspection/thickness data will be shared; format, quality and historical period will be assessed during discovery.
97	SOW	SOW Clause 3.1.8 / 4.8	Which degradation mechanisms are required to be monitored for static equipment and piping (e.g. internal/external corrosion, erosion, CUI, SCC)?	As per best industry practice and prescribed Standards and codes.
98	SOW	SOW Clause 4.2	Which GIS platform is implemented within AMIS, what GIS APIs will be made available, and are spatial layers already maintained for the in-scope assets?	GIS platform within AMIS is Open Source GIS Openlayers
99	SOW	SOW Clause 4.x (CAD)	Which CAD products are presently deployed, what file formats are required to be supported, is two-way integration required, and what is the total volume of drawings to be integrated?	OIL presently has Auto CAD
100	SOW	SOW Clause 4.x (BIM)	Which BIM platform is presently deployed, which IFC version is required to be supported, and which asset classes require BIM integration?	BIM is a futuristic capability that needs be available as presently OIL is not having BIM

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101	SOW	SOW Clause 4.10	Which mobile platforms are required (iOS / Android / Windows), is offline mode mandatory for all functions or only for selected field transactions, and how many mobile users are expected?	Native mobile functionality with online/offline capability is required. All Platforms to be supported. Mobile-user counts will be finalized during design phase
102	SOW	SOW Clause 4.10 / 18.2	Are ruggedised handheld devices required to be supplied by the bidder? Bidder's understanding is that mobile hardware does not form part of the Hardware BOQ and shall be provided by OIL.	Not required
103	SOW	SOW Clause 4.11	Is an electronic Permit-to-Work system presently in use at OIL? Should the ALM solution replace the existing PTW system, or integrate with it?	OIL does not have an electronic permit-to-work system
104	SOW	SOW Clause 4.11	How many permit types are required to be configured in the solution?	It will be finalized during requirement definition.
105	SOW	SOW Clause 4.11	Is electronic signature acceptable within OIL for permit issuance and approval, and is it recognised under OIL's internal governance and statutory framework?	E Work permit is not presently implemented in OIL .
106	SOW	SOW Clause 4.12	Will warranty master data originate from SAP, and are vendor warranty claim workflows (claim initiation through to settlement) required to be executed within the ALM solution?	Warranty information shall be synchronized from ERP, while ALM must support warranty validation, claims, repairs, returns and traceability.
107	SOW	SOW Clause 5.0 / 9.0 / SCC 3.10	Bidder understands that the solution is to be hosted on a MeitY-empanelled, STQC-audited data centre within India and routed through OIL's Azure landing zone, with Azure being the preferred hyperscaler. Please confirm.	Shall be reviewed
108	SOW	SOW Clause 9.0 / SOR Item 290	What is the expected number of named users and peak concurrent users, organisation-wide, for the purpose of sizing the SaaS subscription?	The solution shall support approximately 200 active users. The detailed role-wise split and named/concurrent-user configuration will be finalized during requirement finalization. Organization-wide licensing for OIL shall be included in the quoted price.
109	SOW	SOW Clause 9.0	What are OIL's required RPO and RTO for the ALM solution, and is a separate disaster recovery region within India mandated?	Shall be reviewed
110	SOW	SOW Clause 8.0 / 9.0	Are any mandatory cybersecurity standards applicable beyond IEC 62443 and NIST as referenced in the SOW?	Shall be reviewed
111	SOW	SOW Clause 10.0 (33-A) VAPT	Bidder understands that VAPT is to be conducted prior to Go-Live and annually thereafter through a CERT-In empanelled agency. Please confirm the frequency and the party responsible for bearing the audit cost.	VAPT is required before Go-Live and annually through a CERT-In-empanelled agency; cost is bidder scope.
112	SOW	SOW Clause 10.0 (33-A)	Will OIL carry out independent cyber audits in addition to the VAPT conducted by the bidder? If yes, please indicate the periodicity.	Shall be reviewed
113	SOW	SCC Clause 3.6 / 3.10	Is integration with OIL's SOC / SIEM-SOAR platform required? If yes, please confirm the platform, supported log formats and connectors.	Shall be reviewed

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114	SOW	SCC Clause 3.6 / 3.10	What log retention period is required for application, security and audit logs?	The bidder shall provide backup, recovery, retention and availability arrangements meeting the SOW/SLA and OIL policy requirements.
115	SOW	SOW Clause 10.0 (AMC)	Is 24x7 support required, or is business-hours support with an on-call escalation mechanism acceptable? Please confirm the support window to be quoted.	The SLA defines severity-based response/resolution obligations, but does not expressly state a single business-hours-only support window. The bidder must ensure coverage sufficient to meet those SLAs.
116	SOW	SOW Clause 4.0 (SLA)	Please confirm the severity definitions for support tickets, and the corresponding response and resolution times applicable to each severity level.	The tender explicitly provides P1-P5 definitions and response/resolution targets: P1 1/4 hours, P2 4/24 hours, P3 8 hours/2 days, P4 24 hours/3 days, P5 2/5 days.
117	SOW	SOW Clause 10.0 (AMC) / SOR Item 320	Given that Year 1 of the AMC is on a fixed quarterly charge and Years 2 to 5 are payable on actual hours against the quoted rate card, please confirm how quarterly AMC effort shall be measured, certified and approved from Year 2 onwards.	Will review and appropriate amendment will be provided.
118	SOW	BEC Clause 3.1.2 (Notes) read with "Annexure – Identified Key Personnel", Proforma-XXI, SOW Clause 12.0 and GCC (Key Personnel)	Bidder notes the requirement relating to deployment of identified key personnel. To the extent that any provision of the bidding document requires the proposed key personnel to have been on the payroll of the bidder / supporting company for a continuous period preceding the bid submission date (such as one year or two years), bidder requests that this condition may kindly be relaxed and amended to read that "the identified key personnel shall be on the payroll of the bidder / supporting company at the time of award of the contract." Justification: Specialist resources for asset lifecycle management, data science and predictive maintenance are deployed against project award and are frequently mobilised or on-boarded at the time of contract award. A retrospective payroll tenure condition restricts competition without adding to the assurance of capability, which is already established through the qualification, experience and CV evaluation prescribed under SOW Clause 12.0 and OIL's approval of the deployed team during mobilisation. Bidder further requests that substitution of key personnel be permitted during the contract with personnel of equal or higher qualification and experience, subject to OIL's prior approval, in line with the GCC provision on change of key personnel.	Not acceptable. Tender condition prevails.

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119	SOW	SOW Clause 18.1 – Software Bill of Quantity read with SOW Clause 3.1, SOW Clause 15.3 and SOR Item Nos. 290 & 300	Bidder notes that the ALM platform is to be supplied on a SaaS basis, with software licensing quoted as an organisation-wide subscription for five years, and that SOW Clause 15.3 provides that software support, updates and upgrades shall be governed by the software subscription/licensing and AMC provisions for the contract period. Accordingly, bidder requests confirmation that all software items forming part of the Software Bill of Quantity — including the Historian software for 50,000 tags, and any operating system, database or third-party components — may likewise be offered on a subscription / term-licence basis, co-terminus with the contract and AMC period, and that perpetual licensing is not mandated. In the event that any clause of the bidding document requires supply of perpetual licences, bidder requests that the said clause be suitably amended to permit supply of subscription-based licences valid for the contract duration, as this is the standard commercial model for cloud-hosted OEM platforms and results in a lower overall cost of ownership to OIL.	Subscription based licences to be provided
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ANNEXURE-I: INITIAL RESPONSES TO THE PRE-BID QUERIES

<u>BIDDER-L</u>				
S1 No.	Document	Tender Clause /Reference	Query	OIL's Response
1	SOW		Is solution applicable to Asset classes A/B mentioned in Annexure A/B.	1. All equipments mentioned under Annexure A & B are to be covered as a part of ALM solution 2. Equipments mentioned in Annexure A are to be considered for Sensorization & CBM. 3. Equipments mentioned under Annexure B are to be considered for CBM as and when they are sensorized by OIL
2	SOW	OT Data lake	Who will develop OT Data Lake? What if ALM is ready & OT Data Lake is not available	OT data lake will be setup by OIL; Data will be available even if not implemented as data resides in servers
3	SOW		Is dedicated Mobile app required?	No dedicated Mobile application to be developed. The web application developed should be accessible through Mobile