OIL INDIA LIMITED

(A GOVT. OF INDIA ENTERPRISE)
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CORRIGENDUM NO. 2 DATED 06.10.2026 TO TENDER NO. CDG2752P27 FOR 'HIRING OF SERVICES FOR IMPLEMENTATION OF DIGITAL OIL FIELD (DOF) FOR OIL INDIA LIMITED'.

This corrigendum to Tender No. CDG2752P27 is issued to notify about the following:

1) The **Bid Closing & Opening date** stands amended as under:

   (i) Bid Closing date & time: **3rd November 2026 [14.00 Hrs (IST)]**

   (ii) Technical Bid Opening & time: **3rd November 2026 [14.30 Hrs (IST)]**

2) Responses to pre-bid queries are stipulated vide **ANNEXURE-1** enclosed herewith.

All other Terms and Conditions of the Tender/Bid Document will remain unchanged.

Sd/-
(B. Brahma)
Chief Manager – Contracts
For Chief General Manager – Contracts

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-A

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**Forwarding Letter**	Forwarding Letter Clause 2(h), BEC Clause 2.2, SCC Clause 3.0	Mobilization period is specified as 30 days from LOA. Considering detailed engineering, procurement, FAT, site survey, international logistics, integration planning and mobilization of specialist personnel across multiple location. Practical schedule for large-scale DOF implementation	OIL will review and revert
2	**Forwarding Letter**	Forwarding Letter 4.4.1	Kindly confirm that registration on the e-procurement portal completed within seven days of the bid closing date is sufficient, and that no separate pre-registration deadline applies.	Bidders should register for obtaining the User ID (if not available) for e-Portal at least 7 days prior to Bid Closing date.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**SOW**	Section II, Clause 9.0 Proposed Implementation Plan	The current implementation schedule is aggressive considering the extensive hardware deployment and integration scope. Please give breakup of each delivery as we shall require 5 Months plus on each phase. Reduces execution risk while ensuring successful deployment.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**BEC**	BEC- Experience	Bidder request Oil India to include the below BEC clause to allow bidder to borrow experience from supporting companies. "ELIGIBILITY CRITERIA IN CASE BID IS SUBMITTED ON THE BASIS OF EXPERIENCE OF SISTER-SUBSIDIARY/CO-SUBSIDIARY COMPANY. Offers of those bidders who themselves do not meet the experience criteria as stipulated in Clause No. 3.2 can also be considered based on the experience of their sister-subsidiary/co-subsidiary company (supporting company) within the ultimate parent/holding company subject to meeting the following conditions: Provided that the sister-subsidiary/co-subsidiary company and the bidding company are both wholly owned subsidiaries of an ultimate parent/holding company either directly or through intermediate wholly owned subsidiaries of the ultimate parent/holding company or through any other wholly owned subsidiary company	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			within the same ultimate/holding parent company. Provided that the sister subsidiary/co-subsidiary company on its own meets the experience criteria stipulated in the BEC and not through any other arrangement like Technical Collaboration agreement. Provided that with a view to ensure commitment and involvement of the ultimate parent/holding company for successful execution of the contract, the participating bidder must submit an agreement, as per format furnished vide Proforma-XX, between them, their ultimate parent/holding company, along with the technical bid. Note: In case of A/B above, the supporting company shall not be allowed to submit their separate/independent bid against this tender. In such case, all such bids shall be rejected. Also, bids having technical support from the same entity shall be rejected. Further, bidders shall submit A certificate from the statutory Auditor of the bidding	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			company 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." This will help companies to borrow experience within company.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**BEC**	TECHNICAL EVALUATION CRITERIA	Remove word Mandatory and allow to meet 2 criteria out of 3 mentioned as below. 1. Production Data Management System (PDMS) 2. Remote Wireless Well Head Monitoring and Control (including Integration /augmentation of existing) 3. Integrated Production System Modelling (IPSM), consisting- Please allow 2 out of below. (a)Material Balance Reservoir Modelling (b)Well Performance Model (c)Surface Network Modelling & Optimization (d)Wax & Hydrate Deposition/Prediction Modelling This will allow bidder to qualify the requirement.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**BEC**	BEC Clause 3.1 Financial Evaluation Criteria	We request OIL to consider financial turnover evaluation based on any one year turnover achieved during the last 5 financial years, or alternatively the average turnover of the last 5 years, instead of considering only the last 3 financial years. To accommodate cyclical investment patterns within the Oil & Gas industry.	No change
7	**GCC**	GCC 1.0, Definitions: Sub-Contract / Sub-Contractor	Sub-contracting may be undertaken only with COMPANY's prior written consent in every case with COMPANY's prior written consent, such consent not to be unreasonably withheld, conditioned or delayed; provided that prior consent shall not be required for Weatherford Affiliates, OEMs, licensors, cloud service providers, telecom providers, logistics providers, specialist consultants and routine support vendors identified in the Bid. Contractor remains responsible for performance. The scope necessarily depends on OEM, licensed software, cloud, telecom, logistics and specialist providers. A blanket consent requirement creates delivery risk.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**GCC**	GCC 14.5, Insurance: Waiver of subrogation	"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 liabilities assumed by the Contractor under the Contract." Changes made in line with 14.4	No change
9	**GCC**	GCC 14.6, Insurance: loss payee / consent	"In respect of Insurance claims in which OIL's interest is involved, written consent of OIL will be required". OIL may be named loss payee solely to the extent of its insurable interest. OIL's consent to settlement shall be required only for claims payable directly to OIL and shall not be unreasonably withheld or delayed. Prevents OIL from controlling settlement of Contractor-owned property and personnel claims.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**GCC**	GCC 14.7, Insurance: additional assured	"Oil India Limited" is to be included as Additional Assured in the Insurance Policies to the extent of liabilities expressly assumed by Contractor (except in case of Workmen's Compensation/ Employer's Liability insurance). Additional insured status should be limited to third-party liabilities assumed by Contractor.	No change
11	**GCC**	GCC 14.0, Production of insurance policies	The Contractor on demand from the Company shall furnish the Insurance Policy having detail terms and conditions, with respect to any Certificate of Insurance submitted to the Company. Contractor shall furnish certificates of insurance and relevant endorsements. Complete policies may be reviewed only where reasonably necessary, subject to confidentiality and redaction of commercially sensitive information unrelated to this Contract. Full policies contain confidential information and coverage unrelated to OIL.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**GCC**	GCC 23.2 Warranty and Remedy of Defects	"…Work is not performed within a reasonable time, the COMPANY, at its option may have such remedial Work performed by others and charge the additional cost thereof to CONTRACTOR subject to a maximum of the contract value payable for the defective work which needs corrective action which the CONTRACTOR must pay promptly" Changes made in line with 19.0	No change
13	**GCC**	GCC 24.1 Subcontracting/Assignment	CONTRACTOR shall not subcontract, transfer or assign the contract, or any part under this contract, to any third party(ies), without prior written consent of the Company, which shall not be unreasonably withheld. 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 solution cannot practically be delivered without third-party OEM, cloud, connectivity and specialist support.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**GCC**	GCC 32, Set-off and withholding	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 made by the CONTRACTOR with OIL (or such other person or persons contracting through OIL). Avoids unilateral cross-contract remedies.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**GCC**	GCC 38.0: Pollution and Contamination	The CONTRACTOR shall be liable for all surface and sub-surface pollution to the extent caused by CONTRACTOR's negligence and resulting from CONTRACTOR's operation/service or spillage or dumping of solvents/additive substances or pollutants, which the CONTRACTOR brings to the Site for use in connection with Work to be performed under this Contract and originate above the surface. Notwithstanding anything to the contrary contained herein, it is agreed that except on the ground Of Wilful Misconduct or Gross Negligence criminal misconduct, COMPANY shall release, indemnify and hold CONTRACTOR and its sub-CONTRACTORs harmless from any and all claims, judgments, losses, expenses and any costs related thereto (including but not limited to Court costs and "Attorney's fees") for: a) Damage to or loss of any reservoir or producing formation; and/ or b) Damage to or loss of any well; and/ or c) Any other subsurface damage or loss; and/ or d) Any property damage or loss or	No change

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			personal injury or death arising out of or in connection with a blowout, fire explosion and loss of well control regardless of cause; and/or e) except as provided herein above, any and all pollution or contamination, including any radioactive contamination, resulting from the performance of Contract by the Contractor Changes proposed based on industry standard.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
16	**GCC**	GCC 39.0 STATUTORY VARIATION/ NEWLY ENACTED LAW	Please amend the clause to read as follows. Variation in case of custom duty and Other duties (such as IGST) on CIF Value declared by the bidder shall be to Company's Account. This is self -explanatory	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
17	**GCC**	GCC 44-46, Termination for convenience / takeover / risk and cost	Notwithstanding any provisions herein to the contrary, the Contract may be terminated at any time by the COMPANY on giving 30 (thirty) days written notice to the CONTRACTOR due to any other reason not covered under the above Article from 44.1 to 44.8 and in the event of such termination the COMPANY shall not be liable to pay any cost or damage to the CONTRACTOR except for payment of services as per the Contract upto the date of termination. OIL may terminate for convenience on 30 days' notice and shall pay for completed work, delivered/committed hardware and licences, non-cancellable commitments, reasonable demobilisation/transition costs and an equitable cancellation charge. OIL may use only paid-for deliverables and licensed software in accordance with the licence. Any completion cost following termination for Contractor default is limited to direct incremental cost of the affected scope and subject to the liability cap. To Determine the Contract: In such an event (i.e. termination under Article No. 44.4 to 44.9 above), the contract shall stand terminated and shall cease to be in force from the date of such notification	No change

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			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, to the extent permitted under the Contract, and complete the same 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 over and above the cost at the rate/cost specified in the schedule of quantities and rates/prices. WITHOUT DETERMINING THE CONTRACT: In such an event (i.e. termination under Article No. 44.4 to 44.9 above), the COMPANY may take over the work of the CONTRACTOR or any part thereof, and complete the same 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	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			COMPANY for any excess cost 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. Termination must compensate committed hardware/software costs and cannot transfer or expose proprietary IP.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**GCC**	GCC Cl.14.9, p68	Please limit penal interest for insurance lapse to the affected policy/period and actual impact, subject to overall liability cap, instead of 1% of total contract value. Priority: High. Disproportionate exposure.	To be guided by tender terms
19	**GCC**	GCC Cl.44.9, p91	Please confirm payment of accepted work, non-cancellable OEM/cloud/licence commitments, demobilization and reasonable termination costs upon termination for convenience. Priority: High. Unrecovered commitments	To be guided by tender terms
20	**GCC**	GCC Clause 24.1	Kindly confirm that the purchase of instruments, equipment and licensed software from original equipment manufacturers, supplied by the Contractor under its own scope and installed and commissioned by the Contractor's own personnel, constitutes procurement and not sub-contracting for the purposes of GCC clause 24.1. The instrumentation package is manufactured by third parties and supplied by the Contractor.	To be guided by tender terms

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Sl. No.	Section	Clause Reference	Query	OIL's Response
21	**GCC**	GCC Clause 24.1	Kindly confirm the categories of activity the Company regards as petty support services eligible for sub-contracting with prior written approval, and the procedure and timeline for obtaining that approval.	To be guided by tender terms
22	**GCC**	GCC Clause 16 Liability Limitation	Kindly confirm that liability limitations shall also apply to cybersecurity incidents, data loss, software defects and AI/ML recommendations. Risk allocation.	To be guided by tender terms
23	**GCC**	GCC Force Majeure	Kindly confirm inclusion of telecom network failures, security incidents, civil disturbances, restricted site access and regional flooding as Force Majeure events where beyond contractor control. Field execution risk.	To be guided by tender terms

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
24	**SOW**	SOW 4.2.22, Warranty, Guarantee and Support	18 months from receipt at OIL depot and warranty applies to bought-out items and system software; all faults attended at no cost. Weatherford-manufactured hardware: 18 months from delivery or 12 months from installation, whichever occurs first. Third-party hardware: pass-through OEM warranty only. Software: materially conforms to Documentation for 90 days from Go-Live. Exclusive remedies are repair, replacement, workaround or reperformance. Warranty excludes normal wear, consumables, batteries, OIL/third-party acts, misuse, unauthorised changes, cyber incidents not attributable to Weatherford, and operation outside specifications. Separates product, third-party product, software and service warranties and provides exclusive remedies.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
25	**SOW**	Part-5 Cl.4.2.1.1, p121	Please confirm autonomous control is restricted to Level 1/1.5 field controllers and Level 3 only provides recommendations for operator approval; clarify approved setpoint transfer. Priority: Critical. Architecture conflict.	Remote monitoring and configuration are required, but no control command may originate from FHQ/L4/L5. Recommendations shall be reviewed at Level 3, while autonomous actuation shall execute only in local RTU/PLC/Edge Controllers at Level 1/1.5.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**SOW**	Part-5 Cl.4.1.1.4.4/4.2.8, pp113-115/137-138	Please provide available ESP failure, trip, maintenance, sensor and workover history and confirm KPI treatment where validated gas-lock events are insufficient. Priority: High. Dependent on labelled data	OIL will provide relevant available data. OIL encourage field visits.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
27	**SOW**	Part-5 Cl.4.2.26 / SLA, pp162-163/202	Please confirm whether drift-triggered retraining is additional to four scheduled cycles per year and define approval turnaround and data-availability exclusions. Priority: High. AMC workload ambiguity	Confirmed. Four scheduled retraining cycles per year are the planning limit; retraining is additionally required upon confirmed drift to retain 95% accuracy provisions.
28	**SOW**	Part-5 Cl.7(b), pp173-174	Please clarify deployment location, shift, working hours, on-call expectations, and exact duration for two Resident Engineers and as-applicable experts. Priority: High. Manpower costing.	OIL will review and revert
29	**SOW**	Part-5 Cl.4.2.26, pp161-162	Please confirm acceptance of IECEx/ATEX or equivalent international certificates. Priority: High. Approval lead time.	Yes. IECEx/ATEX certificates/test reports from an IECEx-accredited laboratory or ATEX notified body are acceptable, subject to Clause 4.2.26 and applicable statutory compliance.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
30	**SOW**	52. H Installation & Commissioning Charges	Accessories: JBs, armored cabling, trays, glands, SS tubing, fittings, mounts We request to company shall provide this mounts, fitting, glands and manpower for the same.	Not accepted. JBs, armoured cables, trays, glands, SS tubing, fittings, mounts, accessories and installation manpower are entirely in bidder scope.
31	**SOW**	VFD for ESP pumps 4.2.17	Output Range: Variable-frequency PWM output, continuous from 30 Hz up to 60 Hz (extendable to 90 Hz if required), with output voltage proportional to frequency (V/f) to provide precise ESP motor speed control. Please specify KW, HP and Output voltage range. (Or provide ESP MOTOR Name plate data)	Available relevant data will be provided. OIL encourage field visits.
32	**SOW**	4.2.13.10	VFD for SRP pumps Please provide VFD HP, KW or (Motor Name plate Data)	OIL will provide relevant available data. OIL encourage field visits.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
33	**SOW**	SOW 4.2.1.3 Integration	Kindly confirm that complete API documentation, communication protocol details, database schemas, tag lists, integration specifications and OEM support for ABB SCADA, SAP S4/HANA, OT Data Lake, Historian, RTPMA, GRPC, Yokogawa and Kelton systems shall be provided by OIL and respective OEMs. To ensure successful third-party integration.	OIL will arrange SAP integration software licences. Detailed modules, interfaces and frequency shall be finalized during detailed engineering; bidder shall provide the solution-side integration.
34	**SOW**	SOW 4.1 Future Well Addition	Kindly confirm that future instrumentation, gateways, communication devices and hardware for future wells will be handled through separate commercial arrangements. Scope definition.	The DOF platform shall support 700 wells and at least 150 concurrent users. Sensorization of 380 guarded and producing wells is prioritized; BOQ quantities are for evaluation and the final instrumentation list will be confirmed. Future wells added during the contract tenure shall be onboarded (software part only) without extra cost.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
35	**SOW**	SOW 4.2.1.1 Control Architecture	Kindly confirm that Edge/RTU-based autonomous control architecture is acceptable provided cloud systems operate in advisory mode only. Alignment with Weatherford architecture.	Confirmed. Edge/RTU-based autonomous control is mandatory; cloud/L4-L5 systems shall operate in advisory/read-only mode only.
36	**SOW**	SLA Remote Site Connectivity	Kindly confirm that telecom service provider outages and communication failures beyond contractor control shall be excluded from SLA calculations. Remote field deployment challenge.	Third-party telecom outages may be excluded only where services are outside bidder scope/control and the event is documented and accepted. Bidder-managed telecom failures remain attributable to the bidder.
37	**SOW**	Payment Terms	Kindly confirm whether milestone payments can be released on a pro-rata basis for partially completed and accepted installations. Cash-flow management.	Payment shall be released against completion and acceptance of Kick-off and Mobilization requirements under the payment milestones. Milestone 1 is not linked to field-hardware FAT.
38	**SOW**	AMC Years 2–5	Kindly clarify approval process for AMC man-hour utilization, minimum guaranteed man-hours and carry-forward provisions for unused hours. Commercial clarification.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
39	**SOW**	VAPT Requirement	Kindly confirm whether VAPT audits conducted through OIL-appointed CERT-In auditors can be considered compliant in lieu of separate contractor audits. Audit duplication avoidance.	OIL will review and revert
40	**BEC**	BEC Clause 2.1 Similar Work	Kindly confirm that phased delivery of PDMS, Artificial Lift Optimization, IPSM, Well Integrity and VFM under a single Digital Oilfield contract shall be considered as one qualifying project. Qualification clarification.	OIL will review and revert
41	**BEC**	BEC Clause 2.1 Experience	Kindly confirm that projects executed outside India for international oil companies/NOCs shall be accepted subject to client completion certificates and supporting documents. Global experience recognition.	To be guided by tender terms
42	**GCC**	GCC Clause 16 Liability Limitation	Kindly confirm that liability limitation shall also apply to cybersecurity incidents, data loss, software defects and AI/ML recommendations. Risk allocation.	To be guided by tender terms

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
43	**GCC**	GCC Force Majeure	Kindly confirm inclusion of telecom network failures, security incidents, civil disturbances, restricted site access and regional flooding as Force Majeure events where beyond contractor control. Field execution risk.	To be guided by tender terms
44	**SOW**	DOF Software Scope	Kindly confirm that commercially proven proprietary Digital Oil Field and Production Optimization platforms already globally deployed by the bidder shall be considered compliant if all functional requirements and KPIs are met. Technology neutrality and equivalency.	OIL will review and revert
45	**SOW**	AMC Clause 44-47 (Breakdown Requirements)	The contractor is presently responsible for replacing all failed hardware during the AMC period at no additional cost. Contractors shall remain responsible for replacement arising due to manufacturing defects, workmanship defects only. Fair allocation of risk for remote field-deployed assets.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
46	**SOW**	SOW PDMS business rules	Will OIL share allocation/deferment/well-test logic so we can configure it, and can we go live with core workflows first and add the rest in phases? Existing logic and predefined scripts will be used otherwise.	OIL will review and revert
47	**SOW**	SOW Data residency	Confirm all data (live/historical/model/backup) stays inside India, nothing copied outside. Cloud deployment architecture.	OIL will review and revert
48	**SOW**	SOW Login/SSO	Will OIL use its Azure AD (Entra ID) for single sign-on and create the app registration + user roles? User management for applications.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
49	**SOW**	SOW 4.1.6 Virtual Flow Metering (Hybrid Modelling)	Virtual Flow Metering needs a minimum set of live well data (e.g. wellhead pressures/temperatures, choke/gas-lift data, and MPFM/well-test references, historical production and others) at an acceptable quality and history before ML models can be trained and trusted. Please confirm for which wells live, good-quality data is actually available at project start. Where live data is missing or of poor quality, is it acceptable to first deploy a physics-based VFM model for those wells and then move to trained/hybrid ML models in a phased manner as enough real-time and well-test data becomes available? We also request that the 95% accuracy target apply only from the point at which the agreed data quantity and quality are met. Model accuracy depends on live data availability and quality; a physics-first, phased-to-ML rollout is the practical approach.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
50	**SOW**	SOW 4.2.1 Cloud / 5.0 AMC (Remote Access)	To implement, configure and later retrain/tune the models and workflows, our engineers need remote access to the platform's cloud/virtual-machine environment (through a secure VPN/jump host via OIL's Azure Landing Zone). Will OIL provide such secure remote access to the hosted VM/cloud environment for our team, both during implementation and throughout the AMC period, so we can modify configurations and retrain models without having to be on site? We confirm we will fully comply with data-residency rules: all data and models remain inside India and are accessed only through OIL-approved secure channels, with no OIL data copied or downloaded outside India. Remote access to the VM/cloud environment is essential for configuration and model retraining, and can be done within OIL's data-residency and security controls.	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
51	**SOW**	SOW, AI and ML scope	Kindly confirm the volume, time span, sampling frequency and completeness of the historical production, well test, dynamometer card, electrical submersible pump and SCADA data that the Company will make available for model training, by well type, and confirm that this data will be released within thirty days of the Letter of Award. Model development and accuracy depend on the historical data made available.	OIL will review and revert
52	**SOW**	SOW, AI and ML scope	Kindly confirm the availability of labelled failure, pull and workover history for electrical submersible pump, progressive cavity pump, sucker rod pump and plunger lift wells, and the minimum number of labelled failure events available per well type. Required for failure prediction and remaining useful life estimation.	OIL will review and revert
53	**SOW**	SOW 4.1.5 Well Integrity	Kindly confirm the availability of well design, barrier envelope, annulus pressure and integrity test history required for artificial intelligence based well integrity risk scoring and maximum allowable annulus surface pressure computation.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
54	**BEC**	Clause 2.1, note (i)	Kindly confirm whether wax and hydrate deposition or prediction modelling must be evidenced as a discrete delivered scope element within the claimed similar work, or whether flow assurance modelling performed within an integrated production system model satisfies the requirement at BEC clause 2.1, note (i). Sought so that the Bidder describes the delivered scope accurately.	OIL will review and revert
55	**BEC**	Clause 2.1 Similar Work	Kindly confirm that phased delivery of PDMS, Artificial Lift Optimization, IPSM, Well Integrity and VFM under a single Digital Oilfield contract shall be considered as one qualifying project. Qualification clarification.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
56	**BEC**	Clause 2.1	Kindly confirm that successfully completed phases, work orders or service orders executed under one overarching integrated digital oilfield or integrated production operations programme may be considered as one similar work, where the Bidder submits the relevant contract documents and client certified completion or payment records demonstrating the cumulative executed value and the mandatory functional scope. Relevant where a programme continues under successive contract numbers following a change of operator.	OIL will review and revert
57	**BEC**	Clause 2.1 Experience	Kindly confirm that projects executed outside India for international oil companies/NOCs shall be accepted subject to client completion certificates and supporting documents. Global experience recognition.	To be guided by tender terms

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
58	**BEC**	Clause 2.1, note (i)	Kindly confirm that functionally equivalent project nomenclature, including Integrated Asset Operations Model, integrated field operations, well management, production surveillance and field optimisation programmes, will be accepted where the submitted detailed scope demonstrates compliance with all mandatory functional elements. Nomenclature differs between operators for identical scope.	To be guided by tender terms
59	**BEC**	Clause 2.1.1 (b)	Kindly confirm that a client issued Service Entry Sheet, Certificate of Payment or Contract Completion Certificate, supported by a client certified job report showing the gross value of the job done, the order number, the scope description and the date of completion, satisfies BEC clause 2.1.1 (b) where the client's systems do not issue a document titled Job Completion Certificate. Client systems vary in the title given to the completion document.	To be guided by tender terms

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Sl. No.	Section	Clause Reference	Query	OIL's Response
60	**BEC**	Clause 2.1.1 (b)	Kindly confirm that, where a contract remains in force at the bid closing date, a client certificate stating the value of work executed to date satisfies BEC clause 2.1.1 (b), consistent with note (iii) which provides that completion to the extent of the stated parameters is acceptable experience. Several qualifying works are long term contracts still in force.	To be guided by tender terms
61	**BEC**	Clause 2.1.5	Kindly confirm that any endorsement by the Indian Embassy of documents relating to work executed outside India may be submitted within fifteen working days of a written request made after bid opening, rather than as a condition of bid submission. Legalisation lead times exceed the bid preparation period.	To be guided by tender terms
62	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter	Process pressure/Calibration range Please confirm Line pressure (min, max) Please confirm Calibration range for all Tags	Tag-wise static and calibration ranges are not specified. These shall be finalized during detailed engineering based on process conditions

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Sl. No.	Section	Clause Reference	Query	OIL's Response
63	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds	Temperature transmitters Please confirm Calibration range for all Tags	OIL will provide line size, Operating Pressure/Temperature and Maximum flow, Bidder has to considering sizing assumptions
64	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds:	Thermowell /RTD 'Please confirm Temp sensor and Thermowell insertion length. Please confirm Thermowell process connection.	Thermowell insertion length shall be checked during detailed engineering. Tag-wise process connection and insertion details shall be finalized during detailed engineering
65	**SOW**	PART-4 SECTION-IV SCHEDULE OF RATES (SOR) 35. Wireless Gateways (redundant; antenna kits; cabling ,	Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable) Delivery of instruments shall be 12 months from the date of receipt of manufacturing clearance. Further/ Additionally, , implementation time shall be of 12 months subject to availability of wells at any given time by OIL.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
66	**SOW**	4.2.13.12 Flow meter for Gas lift with flow calculator	Process details 1. Please confirm following details for Orifice sizing of each tag. i) Process temp. range ii) Process pressure range iii) Flow range iv) Line size, Line MOC and line thickness/schedule v) Process media, it's density, viscosity 2. Please confirm if Orifice flange is in vender scope or the same will be in OIL scope. 3. Please confirm Temperature element length	OIL will review and revert
67	**SOW**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB (210 of 307)	Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Please Provide Process data to allow to perform MPFM sizing. For Each Phase - Oil/Gas/water. With min/ Avg/Max Details.	Sand monitor and CIU will not be required. Relevant available data will be provided.
68	**SOW**	4.2.13.6 Water Cut Meter	Water Cut Meter Please Provide Process data to allow to perform WCM sizing	OIL will provide the line size.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
69	**SOW**	5 ANNUAL MAINTENANCE – TERMS & CONDITIONS	AMC Please confirm that AMC is not applicable for all filed instruments - like Pressure/Temp/ Flow transmitters since Oil is asking venders to quote for its spares. Please confirm that AMC is not applicable on Wireless Gateway if it does not house any software.	Not accepted. AMC covers all field instruments and wireless gateways supplied under the contract, including maintenance, calibration, repair/replacement and spares.
70	**SOW**	Annexure-A (Sensorization of 380 Wells)	Annexure-A (Sensorization of 380 Wells) Please confirm Location wise plinth details, Plinth-wise wells and it's respective applicable instruments for each well head - as the same is needed for wireless networking.	OIL will provide details

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
71	**SOW**	Instrumentation in Phase-1	Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable) Delivery of instruments shall be 12 months from the date of receipt of manufacturing clearance. Further/ Additionally, implementation time shall be of 12 months subject to availability of wells at any given time by OIL.	Not accepted. FAT, supply, installation and implementation timelines shall remain as specified in Section 9.0. Delays due to OIL-controlled dependencies may be considered only under the contractual exclusion provisions.
72	**SOW**	3.4.1 Self flow wells	a. Pressure Transmitter (Tubing Head, Casing Head, Annulus and Flow Arm) Asked sensors are 2 or 4 per well?	For self-flow wells, the measurement points are Tubing Head, Casing Head, Annulus and Flow Arm. Final well-wise quantities shall follow Annexure-A and detailed engineering.
73	**SOW**	SOW 4.1.4 to 4.1.7, 4.2.8 to 4.2.11	Kindly confirm the sampling frequency (daily/hourly/minute) of historical and real-time data available for each AI/ML use case, including production data, process measurements, well tests, artificial-lift data, integrity data, and operational events. Required to assess suitability of available data for model development and validation.	Execution frequency shall be configurable at 1-minute, 5-minute, hourly and daily intervals as specified in Clause 4.2.10

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Sl. No.	Section	Clause Reference	Query	OIL's Response
74	**SOW**	SOW 4.1.4 to 4.1.7	Kindly confirm the historical period available for each asset, well, facility, and use case specified for AI/ML implementation. Historical data depth to check AI/ML solution readiness.	The bidder is responsible for QC and upload of all historical data archived on hard disk, Manual data, PDF, Word files into PDMS, including required cleansing, validation and transformation for migration. Historical data volume, period, formats or quality shall be assessed during data collection and detailed engineering.
75	**SOW**	SOW 4.1.4, 4.1.5, 4.2.8	Kindly confirm whether operational events such as failures, shutdowns, workovers, interventions, communication losses, maintenance activities, production curtailments, and equipment replacements are available as timestamped and labelled records. For supervised learning, failure prediction, event-based analytics.	Availability and quality of timestamped/labelled operational events are not confirmed. These shall be assessed during data collection; the bidder shall implement event management and data-quality controls.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
76	**SOW**	SOW 4.1.2, 4.1.3	Kindly provide a brief overview of the existing RTPMA system and clarify the expected integration scope with the proposed DOF platform. Integration	RTPMA means Real Time Production Monitoring and Analysis. Integration with RTPMA and other in-scope systems is mandatory; detailed interface specifications will be finalized during detailed engineering.
77	**SOW**	SOW 4.1.2, 4.1.3	Kindly provide a brief overview of the existing GRPC system and clarify the expected integration scope with the proposed DOF platform. Integration	Interface specifications will be finalized during detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
78	**SOW**	SOW 4.1.7.1	Please confirm if any existing reservoir, well, surface network, facility, or PVT models that may be leveraged for IPSM implementation. For IPSM use	The reservoir model should be fast-running, dynamically updateable, and physics-based to provide changing reservoir boundary conditions to the well and surface-network models. Dynamic, history-matched Material Balance / Tank Reservoir Model, with multiple tanks/sectors where reservoir connectivity or pressure behaviour requires it. The reservoir component should continuously provide the well models with reservoir pressure and productivity/inflow behaviour, while receiving production/injection information from the IPSM. Integrated reservoir–well–surface models are specifically intended to capture these interactions and system constraints.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
79	**SOW**	SOW 4.1.7.1, 4.1.7.2	Please provide details of the modelling tools and software currently used for reservoir, well, network, facility, gas-lift modelling etc and clarify whether existing licenses and models are available within OIL for reuse. For IPSM use	No existing modelling tools or licences are identified for reuse. The bidder shall provide all required software and licences for IPSM and comply with the specified transient/dynamic modelling requirements.
80	**SOW**	SOW 4.1.7.1	Please clarify whether reservoir simulation models already exist within OIL and, if so, identify the modelling platforms currently used	The tender does not confirm existence or platform of OIL reservoir simulation models. Availability shall be assessed during data collection and blueprinting.
81	**SOW**	SOW 4.1.7.1, 4.1.7.6	Please clarify whether the bidder is expected to develop new reservoir simulation models as part of the scope, or consume and integrate outputs from existing OIL reservoir models.	OIL will review requirement of Transient Model and revert
82	**SOW**	SOW 4.1.7.1, 4.1.7.6	Please provide details of any existing well, network, facility, gas lift, or reservoir models that are available for reuse, including modelling tools, model maturity, and update frequency.	Details of existing reusable models, their maturity and update frequency are not specified and shall be assessed during data collection and detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
83	**SOW**	SOW 4.1.7.1, 4.1.7.4	Please clarify whether the IPSM solution is expected to directly couple with reservoir simulation models for closed-loop optimization, or whether production forecasts and boundary conditions will be periodically supplied by reservoir engineering teams.	The IPSM scope includes Material Balance Reservoir Modelling, Well Performance Modelling, Surface Network Modelling & Optimization, and Wax & Hydrate Prediction Modelling. The solution shall comply with the physics-based/dynamic/transient modelling requirements specified in the tender. The IPSM shall incorporate an integrated reservoir material-balance model, capable of assimilating validated historical and real-time/near-real-time production, pressure, injection and PVT data. The reservoir model shall be periodically updated and history matched to generate dynamic forecasts of reservoir pressure, fluid production, water influx, GOR, water cut, depletion and recovery. These reservoir forecasts shall be automatically/periodically interfaced with the integrated well and surface-network model to evaluate future well and field production under

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				prevailing reservoir, artificial-lift, network and facility constraints for all 700 wells.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
84	**SOW**	SOW 4.2.13.5	Please clarify whether the radioactive source, import permit/licensing, transportation, and handling will be under Client scope with Bidder providing supporting documentation? or entirely under Bidder scope?	The MPFM package, including gamma source, permits/licensing, transportation, handling and applicable statutory compliance will be carried out by both successful bidder and OIL.
85	**SOW**	SOW 4.2.13.5	Whether the inline MPFM shall be supplied as a skid-mounted package or as loose/in-line equipment?	The MPFM shall be supplied as a complete inline package including skid and all required accessories.
86	**SOW**	SOW 4.2.13.5	Is the communication cable from the MPFM Flow Computer to the Client host system/DCS is under Bidder scope?	Yes. Communication cabling and complete integration from the MPFM flow computer to SCADA/host systems are in bidder scope.
87	**SOW**	SOW 4.2.13.5	Please confirm whether detailed process Flow and fluid data will be provided for each MPFM location, as this is required for proper sizing and operating-envelope verification	Relevant available data will be provided.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
88	**SOW**	SOW 4.2.13.5	The requirement indicates 11 units with 2-inch and 4-inch sizes. Please confirm the quantity breakdown for each size.	Existing pipe sizes are 2-inch/4-inch/6-inch, Sch 80, 600# RTJ. Final MPFM line size shall be selected during detailed engineering based on site/process data. Line size will be provided.
89	**SOW**	SOW 4.2.13.5	Please confirm whether the MPFM Flow Computer will be installed locally at the meter/skid or remotely in an instrument/control room?	Bidder's choice.
90	**SOW**	SOW 4.1.4 to 4.1.7	Please identify, for every AI/ML use case, whether the required operating mode is monitoring, advisory recommendation, operator-approved control, or fully autonomous closed-loop control. Please also define the approval, interlock and fallback requirements for each mode.	OIL will review and revert
91	**SOW**	SOW 4.2.10	Please confirm whether the VFM solution shall be deployed on the OILs private/public cloud, or Vendor-hosted cloud environment (SaaS)?	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
92	**SOW**	SOW 4.1.2	Are existing Well test Validation, Allocation, Deferment Management based on physics-based models	PDMS shall automate well-test validation using data-quality and operational checks and use approved physics-based well models/performance curves or choke models.
93	**SOW**	SOW 4.1.4.3.2, 4.1.4.3.3	Please confirm whether real-time measurements are available for all network constraints required by the optimization solution, including compressor performance, injection gas flow rates, manifold pressures, header pressures, tubing/casing pressures, choke positions, and production rates.	The tender specifies the required real-time measurements for optimization but does not confirm availability at every location. Availability shall be assessed during site survey/data collection; missing instrumentation within scope shall be provided by the bidder.
94	**SOW**	SOW 4.1.4 to 4.1.7	Please confirm the model-performance KPIs, calculation methodology, test dataset, evaluation period, exclusions, confidence thresholds, and minimum sample size that OIL will use to accept each AI/ML model.	Model acceptance shall follow module-specific KPIs and the overall tool-accuracy SLA. Validation shall use OIL-approved representative datasets/scenarios; detailed methodology, thresholds and sample selection shall be approved during UAT.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
95	**SOW**	SOW 4.1.5.2	Please clarify whether digital barrier models and barrier schematics currently exist	The tender does not confirm existing digital barrier models/schematics. The bidder shall integrate available well-construction/design data and develop the required barrier visualization and workflows.
96	**SOW**	SOW 4.1.4 to 4.1.7	Please clarify whether AI/ML model development, training, tuning, and validation activities are required to be performed entirely within OIL's on-premises environment, or whether controlled use of external development environments is permitted	OIL will review and revert
97	**SOW**	SOW 4.2.3.3, 4.2.4, 4.2.12	Could you confirm which dashboarding and visualization platforms are currently licensed and available for use (e.g., Power BI, Grafana, PI Vision, Tableau, or other enterprise reporting tools)?	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
98	**SOW**	SOW 4.2.1.5, 4.2.8, 4.2.9, 4.2.10, 4.2.11	Kindly confirm whether the historical data, event records, and labelled datasets available at project commencement are expected to be sufficient to support deployment of production-ready AI/ML models at commissioning, or whether an initial data-acquisition, model-training, and calibration period is anticipated. Critical for planning phased deployment and managing AI/ML performance expectations.	The tender does not guarantee sufficiency of historical or labelled data. Data availability shall be assessed during blueprinting; model development, calibration and validation shall use available historical/live data and approved fallback/advisory modes where required.
99	**SOW**	SOW 4.1.7.1, 4.1.7.4	Please clarify the scope and ownership of ongoing reservoir model maintenance, including history matching, calibration, validation, and periodic model updates.	OIL will review and revert
100	**SOW**	3.4.1 Self flow wells.	Please clarify: a. Pressure transmitter (tubing head, casing head, annulus and flow arm) – 4 pressure transmitters needed for each well? b. Temperature transmitters (Tubing head, casing head and flow arm) so 3 temperature transmitters per well?	For self-flow wells, specified points are four pressure measurements and three temperature measurements. Final quantities shall follow revised Annexure-A and detailed engineering.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
101	**SOW**	3.4.2 Gas lift wells	Please clarify: a. Pressure Transmitter (Casing Head, Annulus and Flow Arm)- 3 pressure transmitters per well? b. Temperature Transmitters (Casing Head and Flow Arm) – 2 temperature per well?	For gas-lift wells, specified points are three pressure measurements and two temperature measurements, plus gas-injection flow measurement. Final quantities shall follow revised Annexure-A and detailed engineering.
102	**SOW**	4.1.1	All the data from well heads (in Annexure A) Data transmission to Oil India Data Lake – can MQTT protocol be used? 4.2.1.3 says MQTT can be used. Does all instrument data should go to Data lake using wireless gateway or integrated with existing ABB SCADA RTU at each location?	MQTT is permitted. Where existing SCADA is available, instruments shall interface with the ABB RTU/PLC and data is transmitted through SCADA to the OT Data Lake. Cellular/direct arrangements shall follow the approved site-wise architecture.
103	**SCC**		4.1.4.1.9 – Control fall back to power-based – can we get more details? 4.1.4.4.3 – Does ESP wells have Pump Intake pressure, discharge pressure available?	SRP fallback to power-based control applies when dynamometer data is unreliable. ESP optimization requires pump intake pressure, discharge pressure, tubing pressure and related data; existing availability shall be assessed during site survey/detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
104	**SCC**	Special Terms and Conditions A5.0:	Inspection (Tender wording implying supply/ownership of all software, source code, repositories, model artefacts, feature stores and training pipelines.) All Weatherford Software, Documentation, models, algorithms, tools, templates, configurations, enhancements and pre-existing or developed intellectual property remain Weatherford's property. OIL receives a five-year, non-exclusive, non-transferable, non-sublicensable licence/access right for authorised users, covered assets and internal operations only. Software is licensed, not sold. No reverse engineering, competitive use, source-code access or disclosure is permitted. Essential licence framework for proprietary software and analytics.	Clarified during prebid conference

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
105	**SCC**	SCC 11.0 / Demobilization	Mandatory handover of source code, repositories, model artefacts, feature stores and training pipelines, with no retention by Bidder. At exit, Weatherford will provide OIL data, agreed configuration exports, interface specifications, current Documentation and reasonable transition assistance at agreed rates. Weatherford is not required to transfer source code, proprietary models, algorithms, tools, development repositories, generic know-how, third-party materials or licence keys. Weatherford may retain archival copies required by law and anonymised/aggregated data that does not identify OIL or its assets. Avoids compulsory transfer of proprietary technology and preserves legal/record-retention requirements.	Clarified during prebid conference

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Sl. No.	Section	Clause Reference	Query	OIL's Response
106	**SCC**	Additional provision	Tender does not clearly allocate loss, recovery, abandonment, isolation, third-party exposure, regulatory control and contamination risks for radioactive sources. From delivery to OIL's designated site until return to Weatherford, OIL shall be responsible for security, site control and regulatory coordination for radioactive sources. If a source is lost, damaged, lodged, contaminated or requires retrieval/abandonment/isolation while in OIL Group's care, custody or control or due to well/site conditions, OIL shall bear all risks and costs and indemnify Weatherford Group, except to the extent caused by Weatherford Group's Gross Negligence or Wilful Misconduct. OIL shall lead recovery and regulatory actions, with Weatherford acting in an advisory capacity. Special allocation is necessary because the SoW includes gamma sources and OIL controls the wellsite, access, recovery and operating environment.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
107	**SCC**	Additional Provision	Weatherford Intellectual Property: Notwithstanding anything to the contrary in the Contract, including the GCC, SCC, Scope of Work, specifications, deliverables, audit, inspection, confidentiality, data-ownership, exit-management or handover provisions, Weatherford and its licensors shall retain exclusively all right, title and interest in and to: (a) all Intellectual Property owned, acquired, conceived or developed by or for Weatherford before or independently of the Contract; and (b) all software, source and object code, firmware, applications, platforms, models, algorithms, calculation and optimisation logic, workflows, methodologies, processes, know-how, inventions, designs, databases, data models, schemas, interfaces, APIs, tools, templates, configurations, documentation, reports, repositories, scripts, training materials, generic or anonymised data, improvements, modifications, updates, upgrades, enhancements, derivative works and other technology or work product used, created, configured or developed by or for Weatherford in connection with the tender, negotiations, performance, maintenance, support or termination of	OIL will review and revert

Sl. No.	Section	Clause Reference	Query	OIL's Response
			the Contract, whether created before, during or after the Contract and regardless of authorship, inventorship, funding, incorporation into a deliverable or use of OIL information, excluding only OIL's pre-existing Intellectual Property, raw operational data and OIL-specific final outputs expressly identified as such in the Contract; no ownership, source-code right or other proprietary interest in Weatherford Intellectual Property is transferred to OIL, and, subject to full payment, OIL receives only a limited, non-exclusive, non-transferable, non-assignable and non-sublicensable right during the stated license term to use the object-code Software, Documentation and agreed deliverables solely through authorised users for OIL's internal operations at the agreed assets and locations; OIL shall not, and shall not permit any person to, access or require delivery of source code or development repositories, copy except for permitted backups, modify, adapt, translate, reverse engineer, decompile, disassemble, derive source code, create derivative works, disclose, distribute, sublicense, commercially exploit, benchmark, conduct competitive analysis of, remove proprietary notices	

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			from, or use Weatherford Intellectual Property to develop, train, validate or improve any competing product, software, model or service; any feedback or enhancement relating to Weatherford Intellectual Property shall belong exclusively to Weatherford and is hereby irrevocably assigned to Weatherford, and OIL shall execute documents reasonably required to confirm such ownership; upon expiry or termination, all granted rights shall immediately cease, except any expressly agreed paid-up license stated to survive, and OIL shall cease use and return or permanently delete Weatherford Intellectual Property and certify completion, while Weatherford may retain its Intellectual Property, generic know-how and anonymised or aggregated information that does not identify OIL or its assets; these ownership, restriction, confidentiality, return, deletion, enforcement and accrued-right provisions shall survive indefinitely, and Weatherford may suspend access and seek injunctive or equitable relief for any actual or threatened breach, without prejudice to its other contractual or legal remedies. Protects both background and contract-	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			developed IP, grants OIL a five-year object-code license, excludes source-code and repository handover, preserves OIL's identified raw data.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
108	**SCC**	Additional Provision	Notwithstanding anything to the contrary in the Contract, OIL shall remain solely responsible for evaluating, interpreting and using, and for all decisions, actions and operational consequences arising from or relating to, any data, analysis, model output, forecast, alert, interpretation, recommendation or other information provided or generated by the CONTRACTOR GROUP, its software or equipment; accordingly, OIL shall release, defend, indemnify and hold harmless the CONTRACTOR GROUP from and against all Claims arising out of or relating to such use, reliance, decisions or actions, except to the extent finally determined to have resulted from the Gross Negligence or Wilful Misconduct of the CONTRACTOR GROUP. OIL to be responsible for, and release and indemnify Weatherford against liability arising from data or recommendations supplied during the Services.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
109	**SCC**	Part-5 Cl.4.2.26 / SCC 20, pp162/186	Please confirm whether Azure is mandatory or any MeitY-empanelled cloud is accepted, and provide landing-zone, region, subscription, connectivity, security and cost responsibilities. Priority: High. Cloud compliance and costing.	Refer corrigendum. Solution will be hosted in OIL's Azure environment.
110	**SCC**	Part-5 Cl.4.2.1.6 / SCC SLA, pp124-125/199/204	Where only one network is viable, please confirm how 99.0% monthly site connectivity SLA will be assessed and whether carrier outages qualify for exclusion when store-and-forward operates. Priority: High. Remote-site penalty exposure.	OIL will review and revert
111	**SCC**	SCC SLA Cl.4.0, p203	Please define formula, ground truth, sample size, validation period, eligible datasets, exclusions and aggregation for 95% accuracy at 90% confidence, and confirm module-specific KPIs prevail where different. Priority: Critical. Not objectively testable.	To be provided during detailed engineering discussion.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
112	**SCC**	SCC Cl.5/11/18, pp181-185	Please confirm source-code inspection/handover applies only to project-specific custom code and excludes bidder/OEM pre-existing proprietary products, algorithms and background IP; confirm escrow alternatives. Priority: High. IP protection.	Clarified during prebid conference
113	**SCC**	SCC Cl.17, p185	Please clarify whether all key personnel must be on the bidder payroll for one year, including approved JV/consortium/supporting-company personnel, and state documentary evidence required. Priority: High. Resource eligibility.	To be guided by tender terms
114	**SCC**	GCC 9.1 / SOW 4.2.19 / SCC 17, pp60/154/185	Replacement timelines vary between 15 days and 24 hours. Please confirm the applicable timeline by personnel category. Priority: High. Conflicting requirements.	To be guided by tender terms. In case of contradictions, SCC shall prevail over GCC
115	**SCC**	Part-5 Cl.5 and SCC 4, pp163/181	Please confirm whether three-month Hypercare is included within AMC Year 1 and whether AMC starts at Go-Live or after Hypercare. Priority: High. Commercial inconsistency.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
116	**SCC**	SCC 16 / AMC 33, pp183-184/166	Please provide all referenced OIL data classification, OT protection, backup, endpoint, patch, network-security, secure-development and information-exchange policies before bid closing. Priority: High. Policies not attached.	To be provided during detailed engineering discussion.
117	**SCC**	SCC Cl.16, p184	Please provide SIEM/SOAR make/version, onboarding method, log formats, EPS, retention, connectivity and licence responsibility. Priority: High. Interface specification missing.	SIEM/SOAR solution is from Seceon. Onboarding onto the solution will be installation of an agent in the project infra. Bidder do not have to factor any licenses for the SIEM/SOAR solution.
118	**SCC**	Part-5 AMC 37-38 vs SCC Cyber 8(a), pp167/207	SOW requires VAPT every six months while SCC requires at least annually. Please confirm governing frequency, scope, retest and auditor-fee responsibility. Priority: High. Frequency conflict.	Audit shall be conducted once annually

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
119	**SCC**	SCC Cyber 8(b), p208	Please confirm SBOM standard and format, delivery frequency, vulnerability correlation and treatment of SaaS/COTS components with OEM disclosure restrictions. Priority: Medium. Deliverable ambiguity.	SBOM format will be provided by OIL during the course of the project and all requirements as defined must be duly provided by the succesful bidder as and when required.
120	**SCC**	SCC Cl.16, p183	Please confirm SBOM standard and format, delivery frequency, vulnerability correlation and treatment of SaaS/COTS components with OEM disclosure restrictions. Priority: Medium. Deliverable ambiguity.	SBOM format will be provided by OIL during the course of the project and all requirements as defined must be duly provided by the succesful bidder as and when required.
121	**Payment Terms**	Payment Terms	Kindly confirm whether milestone payments can be released on a pro-rata basis for partially completed and accepted installations. Cash-flow management.	Payment shall be released against completion and acceptance of Kick-off and Mobilization requirements under the payment milestones. Milestone 1 is not linked to field-hardware FAT.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
122	**Payment Terms**	AMC Years 2–5	Kindly clarify approval process for AMC man-hour utilization, minimum guaranteed man-hours and carry-forward provisions for unused hours. Commercial clarification.	OIL will review and revert
123	**Payment Terms**	Payment Terms	For Supply items currently the milestone is 80% against deliver. Bidders propose 40% against callout order and 40 % against delivery. Cash-flow management.	Not accepted. Instrumentation material payment remains 80% upon receipt at site with required inspection, certification, FAT and warranty documents, and 20% upon SAT/Go-Live.
124	**Proformas**	Proforma-E, p235	Proforma-E contains an unrelated reference to drilling wells in the Sadiya block. Please issue a corrected authorization form for Tender CDG2752P27 DOF. Priority: Critical. Mandatory-form bid risk.	Typo Error. Proforma-E will be amended
125	**Proformas**	Appendix-A & Manpower Skill Expectations	We request OIL to allow deployment of personnel from the bidder's global resource pool and affiliated entities, provided they meet or exceed the tender qualification and experience requirements. Allows optimum utilization of global expertise for project delivery.	To be guided by tender terms

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
126	**General**	General compliance	Request Oil India to provide the confirmation to below statement. Please Oil India comply with all applicable import, export, export control, antiboycott, and sanctions laws and DO NOT, directly or indirectly, sell, provide access to, export, re-export, transfer, divert, loan, lease, consign, tranship (including a stop in port), transport, or otherwise dispose of any Contractor product, material, software (including source code), or technology (collectively "Contractor Items") to, via, or for (i) any entity known to be headquartered in, or owned or controlled by a national of any country subject to comprehensive sanctions applicable to Contractor, as of effective date of the Contract or in the future, currently Cuba, Iran, North Korea, Syria, and the Crimea Region of the Ukraine, Donetsk People's Republic or Luhansk People's Republic (ii) any other individual or entity identified on a denied or restricted party list applicable to Contractor, or (iii) any activity or end-use restricted by applicable laws without first obtaining all required government authorizations and written permission of the other Party. Oil India agrees to complete Contractor's end-use, end-user, end-destination documentation when	To be guided by tender terms.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			requested. Notwithstanding anything elsewhere to the contrary, neither Party shall be required to take any action prohibited or penalized by, or to refrain from taking any action required under, the laws of any applicable domestic or foreign jurisdiction relating to international boycotts. Either Party shall have the right, in its sole discretion, to immediately suspend performance or to terminate the Contract or any work order if (i) applicable comprehensive sanctions are imposed, or (ii) the other Party is designated as or determined to be a denied or restricted party under applicable law. Notwithstanding any other provision of the Contract referred herein, Contractor reserves the right to unilaterally and immediately suspend performance or terminate the Contract or any work order if Oil India or the performance of the Contract becomes subject to sanctions, directly or indirectly, even if the performance of the Contract could otherwise be deemed legally permissible. This decision shall be at the sole	

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			discretion of the Contractor and shall not require prior notice or approval from Oil India ". Standard Weatherford compliance provision.	

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
127	**General**	General compliance	"Weatherford's commitment under this bid is subject to and contingent upon the Customer's submission of the Weatherford End User Declaration as verified by Weatherford". Attached is the copy of End User Declaration form.	To be guided by tender terms.
128	**General**	General compliance	Weatherford requests Oil India Limited to confirm the following: the fields and installations on which the equipment will be deployed; that no installation on which the equipment will be deployed is subject to sanctions applicable to the Contractor; the blocks in which the equipment will be used; whether the equipment will be used in a shale gas reservoir; and whether the equipment will be used in a deepwater application. Required for export control screening.	To be guided by tender terms.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
129	**SOW**		AI/ML models: Is there enough data already available to build models or data will start flowing once sensorization is done?	Modelling needs to be done for all the wells, IPSM should done for all the 700 wells. Oil will provide historical data and expect to perform primary AI ML prediction, with more data available model will mature. OIL will provide all the available data but the physics based model has to be brought by bidder.
130	**SOW**		Transient Analysis: Is it required?	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-B

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
1	**FORWARDING LETTER**	Performance Security & Validity of 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.		OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
2	**BEC**		EXPERIENCE CRITERIA: Bidders should meet all the following experience criteria: (A) The bidder must have successfully executed/completed 'Similar Works' in Oil & Gas sector during the last 7 (seven) years 15 (fifteen) years reckoned from the Original Bid Closing Date, as under:	Request to extend timeline from 7 to 15 years	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
3	**BEC**	2.1(A) note (i)	'Similar Works' … shall mandatorily include PDMS; Remote Wireless Well Head Monitoring and Control; IPSM consisting of Material Balance Reservoir Modelling, Well Performance Model, Surface Network Modelling & Optimization, Wax & Hydrate Deposition / Prediction Modelling. Additionally … must also cover at least 03 (Three) of the following areas: SRP or Plunger Lift Optimization; Gas lift Optimization; Electrical Submersible Pump Optimization; AI Based Digital WIMS; Virtual Flow Metering. Bidder requests that the mandatory / additional split be replaced by a single consolidated list, with the requirement that the solution cover at least 08 (Eight) of the following twelve areas.	Bidder requests that the mandatory / additional split be replaced by a single consolidated list, with the requirement that the solution cover at least 08 (Eight) of the following twelve areas: (1) Production Data Management – acquisition, validation and data quality assurance; (2) Remote Well Head Monitoring and Control; (3) Virtual Flow Metering; (4) Transient Multiphase Flow Simulation deployment; (5) Material Balance Reservoir Modelling; (6) Well Performance Modelling; (7) Surface Network Modelling and Optimization; (8) Hydrate Deposition / Prediction Modelling	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				and Management; (9) Digital Well Integrity Management System (WIMS); (10) SRP or Plunger Lift Optimization; (11) Gas Lift Optimization; (12) ESP Optimization.	

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
4	**BEC**	Bids from Consortium	The Bid Security shall be in the name of the Leader of the consortium on behalf of consortium with specific reference to consortium bid and with name(s) & address(es) of Consortium members. Similarly, the Performance Security shall be in the name of the Leader on behalf of the Consortium	Bid Security and PBG to be submitted by leader of consortium	No change
5	**BEC**	Bids from Consortium	Payment shall be made by OIL only to the leader of the consortium towards fulfilment of contract obligations. OIL may consider direct payment to individual consortium members within the same vertical, provided the consortium, so formed is complied with the terms of the Circular No. 07/2016 dated 07th March 2016 issued by the Central Board of Direct Taxes (CBDT). Besides, for direct payment required for their part of scope of works, the same should be clearly indicated in the bid as well as MoU along with member wise details of price break-up.	Request for separate payments and invoicing for the consortium members	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
6	**BEC**	Bids from Consortium	Certified copies (attested by Director/Company Secretary/Authorised Signatory) of Board resolutions/Partnership resolutions passed by respective Board of Directors of the companies/Partners of the LLP agreeing to enter into such consortium with each other for submission of bid for the NIT and also authorizing designated executives of each company/LLP to sign the MOU, to be provided along with the technical bid. Alternatively, General Power of Attorney may also be considered in lieu of certified board resolutions.	GPOA is sufficient even if the bid is a consortium, as GPOA empowers the signatories to transmit offers, bids and carry out any and all negotiations, business and commercial transactions, without any restrictions as such.	OIL will review and revert
7	**BEC**		Bidders to note that "If any bidder (individual/Joint Venture/Consortium) provides documents of jobs/contracts executed outside India against BEC Clause No. 2.1 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	We request for deletion of this requirement. In case of borrowing of experience from sister subsidiary, bidder will be submitting agreement between bidder, supporting company and the holding company. Moreover all	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
			provide the same to OIL within stipulated time period.	documents will be TPI verified.	

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

8	**BEC**		Request OIL to include the below clause: (II) ELIGIBILITY CRITERIA IN CASE BID IS SUBMITTED BASED ON TECHNICAL EXPERIENCE OF SISTER-SUBSIDIARY/CO-SUBSIDIARY COMPANY: Offers of those bidders who themselves do not meet the experience criteria as stipulated in Clause No. 3.1A and/or 3.1B above can also be considered based on the experience of their sister-subsidiary/co-subsidiary company (Supporting Company) within the ultimate parent/holding company subject to meeting the following conditions: (i) Provided that the sister-subsidiary/co-subsidiary company and the bidding company are both wholly owned subsidiaries of an ultimate parent/holding company either directly or through intermediate wholly owned subsidiaries of the ultimate parent/holding company or through any other wholly owned subsidiary company within the ultimate/holding parent company. Documentary evidence to this effect to be submitted by	OIL's standard provision which allows bidder to borrow experience from sister subsidiary / co-subsidiary is missing. We request OIL to kindly include the same as proposed below in the BEC Please consider addition of sister subsidiary clause. Additionally, SLB requests to remove requirement of associated key personnel requirement from entity providing experience. Since, initiatives like DOF require enterprise level expertise and tying it to personnel requirement should not be considered mandatory.	OIL will review and revert

			the ultimate parent/holding company along with the technical bid. (ii) Provided that the sister subsidiary/co-subsidiary company on its own meets the experience criteria stipulated in the BEC and not through any other arrangement like Technical Collaboration agreement etc. (iii) Provided that with a view to ensure commitment and involvement of the sister-subsidiary / co-subsidiary company for successful execution of the contract, the participating bidder must submit an agreement, as per format furnished (as per format Proforma-__), between bidder, sister-subsidiary/co-subsidiary and their ultimate parent/holding company, along with the technical bid. Notes to Para 3.1.2 (B) above: In the situations mentioned in Para No. 3.1.2 (B) above, the supporting company shall not be allowed to submit their separate/independent bid against this tender. In such case, all such bids shall be rejected. Also, bids having technical support from the same entity shall be rejected.		

			Further, bidders shall submit/comply the following: (a) Undertaking by the Supporting Company to provide an additional Performance Security (as per format Proforma-___), equivalent to 50% of the value of the Performance Security which is to be submitted by the bidding company in case the bidding company is the successful bidder. (b) In cases where the Supporting Company do not have Permanent Establishment in India, the bidding company can furnish this additional Performance Security on behalf of the supporting company in addition to their own Performance Security as per tender. In such case, bidding company shall furnish an undertaking that their foreign based supporting company / ultimate parent company is not having any Permanent Establishment in India in terms of Income Tax Act of India. (c) Undertaking from the supporting company to the effect that in addition to invoking the Performance Security submitted by the Contractor, the additional Performance Security provided by		

			the supporting company shall be invoked by OIL due to non-performance of the Contractor. (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.		

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
9	**BEC**		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: Contracts@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.	TPI certificate will be submitted by bidder along with its bid.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
10	**GCC**	Cl. 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	To be guided by tender terms

11	**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,	Typo in placement of the sentence.	No change

			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.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
12	**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	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.	No change

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
			any taxes/ levies, benefit shall be passed on to the Company.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
13	**SOW**	4.1	OIL intends to implement the Digital Oil Field (DOF) solution for 700 wells spanning all its assets. The sensorization of 380 guarded and producing wells will be prioritized for sensorization (ref. Annexure-A). Additionally, the software solution shall impose no limitations on onboarding any future wells, and such additions must be accommodated without any extra cost to OIL.	Kindly confirm the BOM is for 380 wells We understand that the software solution will have no limitation. However, any extra addition beyond 380 wells shall be chargeable as there will be mandays cost associated with it.	OIL will provide list of Gateways as corrigendum.
14	**SOW**	4.1	OIL intends to implement the Digital Oil Field (DOF) solution for 700 wells spanning all its assets. The sensorization of 380 guarded and producing wells will be prioritized for sensorization (ref. Annexure-A).	Kindly confirm the well details at each wellpad/cluster, with the type of well and number of wells.	OIL will provide plinthwise well list as corrigendum.
15	**SOW**	4.1.1.	The successful bidder shall be responsible for the complete design, engineering, supply, installation, testing, and commissioning of all the above instruments.	Kindly confirm the piping modification scope at well and at plant (OCS), is OIL will provide the all the tappings and flanges for inline transmitters/equipment's and for MPFM.	Hot works and pipeling is in bidders scope. During detailed enegineering only the MOCS will be provided.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
16	**SOW**	4.1.1	After installation, all instruments shall be integrated with the existing ABB SCADA RTU system available at each location. The bidder shall carry out all wiring, cable termination, and connections up to the existing ABB RTU panel. The complete termination up to the ABB RTU panel shall be within the bidder's scope of work. Wherever as necessary, bidder will also have to provide the marshalling panel at RTU along with all other accessories.	Kindly confirm the bidder scope is to carry out only wiring, cable termination and connections up to existing ABB RTU panel. OIL will carry out all the software activities and integration with ABB SCADA.	OIL will review and revert.
17	**SOW**	4.1.4.1.1	The solution implemented shall monitor and control existing Rod Lift wells that are not monitored and controlled remotely. Implement a system that allows to control, monitor the well in real time utilizing Variable Frequency Drive (VFD) system equipped with Edge hardware that has IOT capability to analyze and optimize the operation of Sucker Rod Pumping unit using control logic models running on the IOT hardware at well site. A total of 53 wells (45 existing + 8 upcoming) to	Kindly confirm for 8 upcoming wells bidders scope in current tender is limited to supply of the equipments only. In MTO Annexure A, 45 existing SRP wells quantity is not matching with MTO quantity. Kindly confirm the expectation from bidder for the remaining SRP wells equipment and	It is expected to complete the upcoming wells mentioned in scope will be completed within the project duration, the instrument supply and installation is in bidders responsibility, Out of 53 SRP wells 28 VFD are required to supply, remaining wells are already having VFD,

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
			be considered in the scope for SRP optimization.	interface those are not considered in MTO.	compatibility to be checked by vendors by visiting site, OIL will connect with VFD provider and tried get answer for compatibility.

18	**SOW**	4.1.4.2.1	The solution shall cover 75 wells, which includes 34 existing wells and 41 upcoming wells, with inherent provision for future instrumentation, well count expansion.	Kindly confirm for 41 upcoming wells bidders scope in current tender is limited to supply of the equipments only.	The scope covers complete monitoring, control and optimization of all 75 plunger-lift wells, including the 41 upcoming wells. It is not limited to equipment supply. **The bidder shall provide an EDGE-driven autonomous Plunger Lift control system capable of converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-driven autonomous control system. The system shall acquire real-time wellhead pressure, casing pressure, flowline pressure, production-rate and plunger-status data, as applicable, and shall autonomously determine and optimize plunger**

					cycle parameters including shut-in time, opening time, plunger arrival, afterflow duration and cycle frequency. The EDGE controller shall continuously evaluate actual well response following each control action and shall adapt subsequent PL cycles based on real-time operating and production data. For PAGL wells, the system shall additionally support coordinated optimization of plunger-lift and gas-lift parameters. The system shall support closed-loop autonomous operation without requiring manual intervention for routine cycle optimization, while retaining operator

					supervisory control, configurable operating limits, manual override and fail-safe fallback modes.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
19	**SOW**	4.1.4.2.3	The solution shall cover all the 48 gas (continuous and intermittent) lift wells, with inherent provision for future instrumentation, well count expansion, and lift regime changes.	Bidder to understand the split of continuous and IGL wells	OIL will provide separate list of gas lift well and IGL wells.
20	**SOW**	4.1.4.3.2	Optional wellhead and annulus sensors for enhanced diagnostics and stability monitoring	Bidder need clarification this optional wellhead and annulus sensors are included in the Annuxure A MTO in the tender, or these are additional sensors.	If bidders think additional sensors and instruments, bidder has to provide.
21	**SOW**	4.1.4.3.4	The solution shall support legacy intermittent operation using timers or valve controllers where existing hardware dictates, without replacing the primary closed-loop control capability.	Do bidder has to provide Electronic Time Cycle Controller on existing for timer purpose, or any other hardware that is not in Annexure A MTO. Pls clarify.	There is no manual ETCC but, There should some provision to operate it manual from the field. Through HMI or something. EDGE shall dynamically configure and update the GLPC and OCT based on the well's real-time production attributes and operating conditions.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
22	**SOW**	4.1.4.3.4	The solution shall integrate with shared multiphase flow meters for automated well testing, including routing, stabilization monitoring, test validation, and automatic updates to well models, optimized setpoints, and allocation priorities.	Bidder wants to understand this in more detail. Is the expectation is automated well testing, is there existing valves automated in the manifold and at other location and pipelines from wells are well separated to unable automated well testing including routing. Bidder wants to understand the expectation of client.	Well testing is manual. The well production testing results shall be validated with MPFM, Test Separator, SCADA, VFM and other available measurement systems, as applicable.
23	**SOW**	4.1.4.4.1	The objective of this initiative is to optimize ESP-operated wells by combining first-principles physics-based modelling with machine learning–based analytics for 28 wells (8 existing ESP wells and 20 upcoming wells).	Kindly confirm for 20 upcoming wells bidders scope in current tender is limited to supply of the equipments only. Is Existing 8 ESP wells have VFD. If VFD is available, do bidder have to change this with new VFD or upgrade the VFD with controllers.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
24	**SOW**	4.2.13.5	Instrument Type: Inline flow through instrument / non-separation type with field replaceable venturi to accommodate changing flow requirement.	Clarification required. As the Venturi throat is fixed and is not field-replaceable in the fixed Vx Spectra meter. However, a Low-Rate Extender (LRE) can be offered to extend the measurement capability toward lower flow rates. LRE size to be defined based on the process data and sizing simulations reports.	Tender specification prevails.
25	**SOW**	4.2.13.5	- Uncertainty for liquid flowrate: ± 5% relative or better for GVF < 95%. - Uncertainty for gas flowrate: ±8% relative or better. - Uncertainty for water cut: ± 4% absolute or better.	Achievable performance depends on the selected meter size and operating envelope. Complete process data are required to evaluate the uncertainty range.	Tender specification prevails.
26	**SOW**	4.2.13.5	Gamma half-life: minimum 20 years	Customer acceptance of a deviation is required. Vx Spectra uses a Ba-133 source with a	Tender specification prevails.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				physical half-life of approximately 10.5 years.	
27	**SOW**	4.2.13.5	MVT output: Modbus RS 485	The Modbus output is provided by the MPFM flow computer rather than directly by the MVT. The flow computer can provide Modbus TCP/IP or RS485. Kindly confirm if MPFM and MVT output are meant same.	Tender specification prevails.
28	**SOW**	4.2.13.5	MPFM Flow-computer enclosure material : SS316L	The standard flow-computer enclosure is low-copper aluminum with an anodized coating; it is not SS316L.	Tender specification prevails.
29	**SOW**	4.2.13.5	Isolation valve type: Double block and bleed material : 316 SS	DBB material is to be confirmed as Inconel or Duplex based on the final process conditions and package configuration.	Tender specification prevails.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
30	**SOW**	4.2.19 (4)	CARE OF WORKS: From the commencement to completion of work, the successful bidder shall take full responsibility for the care of all equipment and pipelines including all temporary works and in case any damage, loss or injury shall happen to the equipment/work/person or to a part thereof due to negligence of the successful bidder, the same shall be rectified/compensated by the successful bidder without any extra claim	Not agreed. This will follow Cl. 15 of GCC	Tender specification prevails.
31	**SOW**	9.2 Instrumentation in Phase-1 Sr. No. 9.	Five-year maintenance and spares Maintenance will be the responsibility of Vendor during the AMC period of the hardware as per the BOQ - 5 Years of AMC	The five-year maintenance scope and responsibility require clarification.	OIL will review and revert.
32	**SOW**	4.2.25 Instrument Maintainability Requirements	Five-year maintenance and spares 1. Spare Management b. Bidder shall maintain 10% spares of the field instruments, edge devices & RTUs, deployed as part of the solution provided by OIL, in case of any emergency or regular maintenance breakdown.	Clarification required. Standard supply includes two years of recommended spare parts. Insurance/major spares such as the flow computer, gamma detector and temperature probe	OIL will review and revert.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				can be quoted separately. The five-year maintenance scope and responsibility require clarification.	
33	**SOW**	4.2.1.1	'Data Flow Architecture	Kindly clarify who has to provide the proposed firewalls.	Firewall and Infra will be provided by OIL, Bidder has to provide sizing.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
34	**SOW**	4.2.1.3	'The DOF solution provider needs to incorporate these existing systems to the OT data lake via existing SCADA system. The scope of work shall include the consolidation and hosting of the complete dataset - including both historical and real-time data - pertaining to wellheads, SRP, ESP, and other associated systems, within a unified platform. The scope of work will also include of supply & integration of suitable server (minimum 2 nos.) for OIL existing SCADA system – rack server, intel Xeon 3.2 Ghz, 64 GB RAM, 2 TB HDD RAID-1, Windows Server 2022, with Dual power supply and 4 ethernet ports along with necessary software (SCADAVANTAGE) and license.	'1. Existing M/s Yokogawa India Ltd. (for 10 wells) and by M/s Kelton Technologies Ltd. (for 77 wells) are cloud-based solutions, bidder wants to know who will provide us the API's and integration support from these solutions. As these are third party and are in OIL control. 2. Integration of existing solution to OT data lake via SCADA system. Bidder wants to understand what is the expectation from integration only data mapping in the historian or something else. 3. As all these parties Yokogawa, Kelton and SACDA OEM are in OIL control, Bidder wants to	Till OPC its in OIL's scope and integrating to this will be in bidders scope. For further details bidder has to perform site survey

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				understand the integration scope in detail for bidder and is OIL will be responsible to provide the access to existing system, availability of OEM engineers (existing systems) for the integration.	

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
35	**SOW**	4.2.1.3	'The existing well head data of 90 wells which is presently at cloud, needs to be integrated with the SCADA system directly from the EDGE device through GSM and ISP device over MPLS technique. If any additional device is required, bidder shall consider that in their scope.	'OIL to provide the access to existing systems and availability of existing system engineer for the successful integration	OIL will provide access to the existing RTUs.
36	**SOW**	4.2.1.7	Bidder want to highlight that mostly the network coverage is available all maximum Oil sites. As there is no detailed well site location included in the tender, bidder wants to understand if at any well site the network coverage will not be available for data transmission. How to hand over the system and who is responsible for the network coverage availabiliity from telecom vendors.		Oil will provide Well list for each site, bidder has to perform survey in order to find the GSM connectivity.
37	**SOW**	4.2.5.1	Bidder wants to understand how OIL will provide the HV, is there any existing feeders and this bidder to take the power from that feeder at site. What will be the source from bidder for this HV supply and scope start point for bidder.		OIL will review and revert.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
38	**SOW**	4.2.6.4	Bidder want to understand is the HMI requirement is on EDGE device or separate HMI is required at field. In EDGE specification the requirement of HMI is not mentioned. Pls clarify - 1. On which cabinet HMI is required? 2. Details of Optional larger panel interface for centralized local monitoring.		HMI is required at edge device level.
39	**SOW**	4.2.7.4	Bidder want to understand is the HMI requirement is on EDGE device or separate HMI is required at field. In EDGE specification the requirement of HMI is not mentioned. Pls clarify - 1. On which cabinet HMI is required? 2. Details of Optional larger panel interface for centralized local monitoring.		HMI is required at edge device level.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
40	**SOW**	4.2.8	Autonomous control: Maintain intake pressure (PI) within set band using frequency adjustments; automatic switch to amp/load control on PI signal loss.	Bidder wants to understand how OIL will provide the HV, is there any existing feeders and this bidder to take the power from that feeder at site. What will be the source from bidder for this HV supply and scope start point for bidder.	OIL will review and revert.
41	**SOW**	4.2.13	Technical Specifications of Instrumentation:	Bidder wants to know the following - 1. Operating and Design ranges required for wireless pressure transmitter, temperature transmitter, water cut meter, magnetic flow meter, mass flow meters. 2. Flange Size and Rating of remote seal Pressure transmitter.	OIL will provide line size, Operating pressure/Temp, and Maximum flow rates.
42	**SOW**	4.2.13.5	MPFM (Multi Phase Flow Meter)	What is the minimum and	OIL will provide line size, Operating

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				maximum flow at each OCS manifold.	pressure/Temp, and Maximum flow rates.
43	**SOW**	4.2.13.5	In case of 02 nos. of SPFs wherein it is planned to install the MPFMs; two dedicated PCs for hosting the MPFM software, EDGE devices, RTUs, GSM modems shall be considered so that seamless data transmission takes place between the MPFM and SCADA through GSM.	Bidder wants to understand the following - 1. Are these SPF are not in OCS and are in remote location? 2. Where these PC's will be placed at site, in any control room or with OIL security team? 3. On which SCADA this data should be landed?	OIL will provide some space at SPF level.
44	**SOW**	4.2.13.4	Magnetic Flow Meter Kindly provide the below details - Line Size Flange Size and Rating Range		OIL will provide line size.
45	**SOW**	4.2.13.6	Water Cut Meter Kindly provide the below details - 1.Line Size 2. Flange Size and Rating 3. Range		OIL will provide line size.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
46	**SOW**	4.2.13.8	Wireless Gateways (Wireless HART/ ISA 100.11a)	The total quantity mentioned in the MTO Annexure A is 200, is this considering redundant gateway.	OIL will review and revert
47	**SOW**	4.2.13.12	Flow meter for Gas lift with flow calculator	Kindly provide the below details - 1.Line Size 2. Flange Size and Rating 3. Range	Flow computer to be considered. Additional data will be provided during detailed engineering.
48	**SOW**	4.2.14	Actuated choke valve (for gas and plunger lift wells)	Provide more detailed specification on actuation type requirement (motorized, Pneumetic, process actuation etc.) Provide the size of valve required with process connection (Flange class , size and rating) Provide the fluid flow rate.	Shall be finalized during detailed engineering based on site/process conditions

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
49	**SOW**	4.2.15	Actuated Production valves (for plunger lift wells) Actuation Method: Pneumatic or electric actuation tied to plunger-lift controller logic for shut-in, plunger fall, and production phases. In case of pneumatic actuation, will OIL provide the Instrumentation Air for actuation. Provide the size of valve required with process connection (Flange class , size and rating) Provide the fluid flow rate.		Currently it is actuated through electronic device, filed operations are pneumatic actuated.
50	**SOW**	4.2.16	Actuation Method: Typically, pneumatic or electronic actuation integrated with a plunger-lift controller for automated release and catch sequencing. In case of pneumatic actuation, will OIL provide the Instrumentation Air for actuation. Provide the size of valve required with process connection (Flange class , size and rating) Provide the fluid flow rate.		Currently it is actuated through electronic device, filed operations are pneumatic actuated.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
51	**SOW**	4.2.21	4. Once a failure is detected, the test shall be restarted from the beginning. The system will be considered commissioned after the successful completion of SAT (for Overall DOF Platform). If minor SAT failures, such as non-critical defects, cosmetic issues, or documentation gaps, occur during commissioning, the solution Go-Live will not be affected, subject to evaluation of their impact and severity on the DOF solution.	SAT should phase wise as the project duration will be around 3 years and wells will start getting live progressively. One go commissioning and will be difficult due to the remote sites, network issue that is not in bidders control and any other OIL's network issue.	OIL will review and revert.
52	**SOW**	4.2.21	OIL shall witness successful uninterrupted operation of the supplied system for a duration of minimum 72 hours at each well plinth Annexure B	72 hours uninterrupted operation for overall DOF should be changed to phased manner and progressive.	No change
53	**SOW**	4.2.21	SAT and Go-Live acceptance shall be subject to successful compliance with the benchmarks specified under Clause 4.2.1.7.	SAT completion should be progressive , batch wise wells and ODC wise installations.	No change
54	**SOW**	4.2.13.5		Please provide Process data and H2S level if any to	OIL will review H2S data and share available data

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				evaluate the Meter size.	
55	**SCC**	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.		OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
56	**SCC**	RA Source (MPFM)	In accepting any order to perform or attempt to perform any supply involving the use of radioactive material, Company agrees that Contractor shall not be liable or responsible for injury to or death of persons or damage to property (including, but not limited to, injury to the well), or any damages whatsoever irrespective of the cause, arising out of or in any way connected with Contractor's supply of radioactive materials. Company shall absolve and hold Contractor harmless against all losses, cost, damages and expenses incurred or sustained by Company or any third party irrespective of the cause excluding Willful Misconduct and Gross Negligence by Contractor or its agents, servants, officers or employees, resulting from any such supply of radioactive material.	Since the scope includes supply of MPFM with RA source, request OIL to include its standard clause.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
57	**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.	OIL will review and revert.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				6118087 for hiring of wireline services in OALP Block	

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
58	**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	OIL will review and revert.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				OALP blocks Contract No. 6118193 for hiring of cementing services	

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
59	**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	OIL will review and revert.

60	**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	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.	OIL will review and revert back

			on all interpretations, recommendations, deliverable and / or well or reservoir descriptions.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
61	**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.	OIL will review and revert back

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
62	**SCC**		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	OIL will review and revert back

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
63	**SCC**	16.0 (read with 4.2.24	The bidder must supply software (with all licenses), hardware, design, develop and commission the solution as per the scope of work. … During the contract period and its extension if any, if the systems require operating system, software release upgradation … it shall be provided without any additional license, service cost implication to OIL.	The tender does not specify the licensing model to be quoted. Bidder requests the Company to confirm: (a) whether software licences are to be quoted on a term / subscription basis co-terminus with the 72-month contract period,	License term will be Perpetual

64	**SCC**		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		OIL will review and revert

			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.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
65	**SCC**	Annexure WP & Annexure WS	Delete and mark as "Not Used"		No change
66	**SOR**	Table D. Digital Oil Filed (DOF) – Hardware Supply. Item No. .31	Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Sand monitor included in MPFM package	Clarification required. A sand monitor is not part of the standard MPFM supply, and no technical specification is provided in the tender. The requirement and expected technology to be clarified.	Sand monitor and CIU will not be required.
67	**SOR**	Table D. Digital Oil Filed (DOF) – Hardware Supply. SN.31	Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB CIU included in MPFM package	Clarification required. CIU is not defined in the tender. Please confirm whether this refers to the MPFM flow computer.	Sand monitor and CIU will not be required.
68	**SOR**	B. TERMS OF REFERENCE BOQ 31	SOR Reference / Scope Coverage 11 inline non-separation MPFM packages, including densitometer, cross correlation/measurement modules, flow computer, DBB arrangement, skid/accessories and SCADA connectivity	Skid requirement will be for all 11 Meters. Request to please clarify.	Skid needs to provided (11 nos.)

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
69	**APPENDIX-IV**	Declaration	Delete and mark as "Not Used"	Request OIL to delete this proforma. Bidder will not be able to submit this declaration. Proforma requires key personnel from experience provider entity.	No change
70	**SOW**	4.1.3.4	Safety & Fail-Safe Operations - Implementation of fail-safe shut down logic for gas lift wells.	Kindly confirm the SIL rating requirements.	Only BPCS will suffice.
71	**SOW**	4.2.22	The Bidder shall deploy resources for operations and maintenance to carry out regular ongoing work related to upgrades, updates, bug fixing and enhancements etc. The O&M shall be carried out by the bidder after Go-LIVE	Upgrade should be removed. If required, this should be on additional cost.	The upgrades are related to software, and it is under the scope only.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
72	**SOW**	4.2.22	The equipment / materials will be guaranteed for a period of 18 (eighteen) months from the date of receipt of the material at OIL's depot. 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. The warranty is applicable to bought out items and system software also. Any system/ software fault during warranty period, supplier has to attend after receiving of calls from M/s OIL at no additional cost.	OIL will provide the storage yard for these instrumentation and equipments after receipt at client site.	Storage will be in bidder's scope.
73	**SOW**	4.2.24	The Bidder shall maintain the existing operating & application software to improve upon performance of the system. Software modification and upgradation as & when required shall also be covered under this scope at no extra cost.	Modification and Upgradation shall be chargeable on manday cost. Bidder's responsibility to maintain the solution delivered during SAT.	The maintain and upgrade of vendor provided system is in bidders scope. Update: The new use cases or workflow other than mentioned in tender documented should be additional chargeable.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
74	**SOW**	4.2.25	b. Calibration and configuration of all the field instruments under the scope of this contract will be carried out by Bidder as defined by OEM or as requested by OIL on need basis. The Bidder shall make schedule for calibration of all instruments and follow it strictly. After calibration of field instruments, report shall be prepared. Moreover, all the carried-out day to day maintenance jobs must be recorded properly in the Instrumentation Maintenance register.	What is the periodic instrumentation calibration frequency in OIL?	Other than during the guarantee period, the Vendor shall be responsible for instrument calibration and primary maintenance throughout the contract period. 1. The scheduled calibration frequency for all instruments and MPFMs shall be once every year. 2. Any performance drift or deviation observed in instruments/meters during normal operating conditions shall be promptly addressed by the Bidder, including necessary calibration, adjustment, testing, and restoration of the instrument/meter to the specified performance accuracy, at no

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
					additional cost to OIL.
75	**SOW**	5	Bidder is responsible for both planned and unplanned shutdowns. In case of a planned shutdown, bidder needs to get approval from OIL team and convey well in advance of the system downtime. The downtime window will be conveyed by bidder and scheduled maintenance will be carried out during that time period only. Bidder will up the system with business-as-usual conditions within the downtime window.	How many days of advance notice (in days) from vendors is required by OIL for - 1. Planned Shutdown 2. Unplanned Shutdown As any delay in providing the shutdown will impact project delivery schedule.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
76	**SOW**	5	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.	Bidder needs clarification. As per tender, guarantee of the material is 18 (eighteen) months from the date of receipt of the material at OIL's depot. If fault occurs after 18 months i.e. when equipment is out of warranty, who will be responsible for the repair cost including transportation for 5 years of AMC period, or will OIL pay as per actuals? "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	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				be paid based on hours consumed for which the bidder needs to quote an hourly rate card."	
77	**SOW**	5	ANNUAL MAINTENANCE - TERMS & CONDITIONS	Is the maintenance comprehensive or non-comprehensive?	OIL will review and revert
78	**SOW**	5	All logistics, labour, transportation, and related costs for repair or replacement shall be borne entirely by the bidder.	Kindly confirm this is applicable on under-warranty equipments and post warranty completion OIL will pay as per actuals.	OIL will review and revert
79	**SOW**	9.2	Instrumentation in Phase-1	Project duration is not feasible as mentioned in the tender. The project phase should be at least 27 months from the date of approval of drawings required for placement of instrumentation and equipment order.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
80	**SOW**	9.3	Software Implementation/Maintenance	Project duration is dependent on Control Command Center and DOF wells instrumentation completion. This needs additional 6 months.	OIL will review and revert
81	**SOW**	Annexure A	The quantity of instruments provided in the above list is tentative and may change. Bidders will have to visit OIL sites before price bid to assess the availability of instruments in field and the subsequent instrumentation requirement in order to achieve autonomous optimization as per their software. For crude oil application please consider Remote Seal type pressure transmitter.	Bidder wants to highlight that the instrument and equipment quantity shall be finalized as per Annexure A to provide the accurate tender value. Any additional transmitter or equipment required shall be chargeable extra. This should be clearly defined in the tender.	OIL will review and revert
82	**SOW**	Annexure-B	Plinth Details	Please provide the details of number and type of wells per cluster / well location.	OIL will provide.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
83	**SOW**	4	The Contract shall be valid for a period of 72 months [12 months for implementation & 60 months of AMC (includes 3 months of Hypercare) after going live from the Effective Date], comprising: a) Implementation Phase b) Go-Live c) AMC (including Hypercare Period after Go-Live)	Implementation phase of 1 year is not feasible. This should be 27 months. Additional 6 months for workflow deployment after commissioning of DOF and CCC projects.	No Change
84	**SOW**	21	The bidder shall deploy a project monitoring and tracking system (tool/software) to manage schedules, resource allocation, milestones, and deliverables. Primavera P6 is recommended as the preferred tool.	Bidder requests to include MS Project and other project monitoring tools.	Primavera project management software will be facilitated by OIL
85	**SOW**	Migration of Instruments	Migration of instruments from one location to another per site	Bidder needs clarity on the following - 1. Is this migration limited to instruments only? 2. Will the migration be on site where RTU and Solar is available, not on any new site? 3. Pricing should be as per well type as the quantum of work	One migration event covers relocation of all DOF-scope instruments installed on one well to another location within the same sphere. Thirty events are priced; inter-sphere migration is excluded

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
				is different and based on well type.	

86	**SOW**	SOW 4.1.2; 4.2.3; 4.2.24 AMC T&C Sl. 19-20 PDMS includes the defined production workflows (mass/volumetric balance, well-test validation, event/deferment management and production allocation). SOW 4.2.3 states that additional PDMS workflows will be assessed for manpower, time and cost. AMC clauses also include rule changes, approval-workflow reconfiguration, integration with other IT systems and addition of data sources.	Please confirm the scope boundary between included configuration/enhancement and a new workflow/change request. 1) Are the baseline workflows limited to those expressly defined in the SOW? 2) Will new business workflows/modules, new external systems/data sources, or material changes in business logic be handled through agreed change control with effort and commercial impact? 3) Please define examples/criteria for a 'minor enhancement' versus a 'new workflow'.		The workflows, other than those explicitly specified in the Tender Document, shall be implemented in accordance with the applicable MOC procedures. Minor Changes shall be covered within the Bidder's scope and shall not be considered as a separate change request. Minor Changes shall include, but not be limited to: • Change in a well's operating mode, such as conversion from self-flowing to artificial lift or vice versa. • Changes in well, reservoir, production, or operating parameters. • Changes or updates to the completion configuration of existing well models. • Changes in the

					artificial lift method/mode, such as CGL, IGL, PL, PAGL, ESP, SRP, etc. • Modifications or updates required to existing models/workflows due to changes in well operating conditions. Further, the addition and integration of newly drilled wells and workover wells into the applicable and already-defined workflows shall also be covered under the Bidder's scope, including the necessary model configuration, parameterization, validation, and commissioning.

87	**SOW**	SLA Cl. 4.0 (Tool Accuracy) SOW 4.2.8 to 4.2.11 SLA Cl. 4.0 applies a generic minimum 95% accuracy at 90% confidence interval to simulation, AI/ML analytics and optimization. Individual workflows specify different acceptance measures, e.g. ESP precision/recall and energy/PI KPIs, Digital Well Integrity classification >=90%, VFM MAPE ranges, and IPSM MAE/MAPE.	Request OIL to amend SLA Clause 4.0 so that the acceptance criteria for each workflow shall be governed by the workflow-specific KPIs defined in the respective SOW clauses, instead of applying a common ≥95% accuracy at 90% confidence interval requirement across all workflows. Accordingly, please define for each workflow the applicable KPI/metric, calculation methodology, ground-truth/reference source, validation sample size or time window, data-quality exclusions, acceptance/re-test procedure and the point from which SLA penalties shall apply. Further, request OIL to amend the penalty provision so that any accuracy-related penalty is applied only to the affected workflow/use case and its corresponding BOQ line-item value, rather than to the aggregate "Implementation Charges" comprising Sections A, B, D, E, G and H.		OIL will review and revert

88	**SOW**	SOW 4.2.1.1 (Control Commands) SOW 4.2.5 to 4.2.8 Level 4/5 and cloud applications are restricted to monitoring, analytics and advisory decision support; autonomous control is to execute within the OT zone. The SRP, plunger-lift, gas-lift and ESP workflows also describe cloud AI/analytics, edge/local optimization and autonomous or closed-loop operation.	Request OIL to clarify and align the architecture requirements under SOW 4.2.5–4.2.8 with the control-command restrictions of SOW 4.2.1.1. Please provide an execution/deployment matrix for SRP, Plunger Lift, Gas Lift and ESP identifying the permitted location (Level 1/1.5, Level 3 or Level 4/5/cloud) for: (i) data processing, (ii) physics/AI/ML model inference, (iii) optimization/setpoint calculation, (iv) operator approval, (v) autonomous control logic, (vi) model retraining, and (vii) deployment of updated models. Where fully autonomous/closed-loop operation is required, please confirm that the executable optimization/control logic shall reside within the permitted OT layer and identify the applicable level. Please also clarify the mechanism for transferring validated models, recommendations and/or setpoints between cloud/enterprise systems and the OT environment, including required approval and cybersecurity controls.		Cloud/L4-L5 functions shall remain advisory. Recommendations require authorized Level-3 review and approval. All autonomous control, including SRP, plunger-lift, gas-lift and ESP control, shall execute locally in RTU/PLC/Edge Controllers at Level 1/1.5 within OIL's OT zone.

89	**SCC**	SCC Cl. 5, 11 & 15 Payment Milestone 5 SOW 9.3 OIL may inspect source-code repositories and deployment scripts; demobilization/handover includes source code, repositories, model artefacts and training pipelines. Final closure also requires source code/configuration artefacts, while Go-Live includes execution of a software license agreement.	Request OIL to amend/clarify SCC Clauses 5, 11 and 15 and Payment Milestone 5 to distinguish between (a) bidder-developed project-specific/custom deliverables and (b) pre-existing proprietary/COTS/OEM software and intellectual property. Source-code and repository handover should apply only to custom code, scripts, integrations, configurations, data pipelines and other deliverables specifically developed for OIL under this contract. Pre-existing proprietary product source code, standard product frameworks, algorithms, libraries, reusable components and third-party/OEM source code should remain excluded and continue to be governed by the applicable software licence terms. For proprietary/COTS/OEM components, please specify the required handover deliverables, such as licences, executable/binary packages, APIs, configuration and deployment artefacts, administration documentation and, where specifically required, mutually agreed source-code escrow. Please also define OIL's licence		For COTS source code need not to provide by bidder.

			and usage rights during the contract/AMC period and after contract expiry, and clarify that the requirement to hand over/delete data, models and artefacts at demobilization applies to OIL-specific data and project deliverables and does not require transfer or deletion of the bidder's or OEM's pre-existing intellectual property.		

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
90	**SOW**	BOQ Item 14 SOW 4.2.1.7-A SOW 10.0 BOQ Item 14 specifies a web-based DOF application for 150 users, whereas the platform benchmark and SOW 10.0 require 180 concurrent authenticated users (50 viewers, 120 operators and 10 administrators).	Please confirm the definitive software licensing and capacity basis: 150 users or 180 concurrent users. Also confirm whether licenses are named, concurrent or role-based; the required quantity by role; and whether the quoted software/subscription price must cover the full confirmed user population for the complete contract period.		OIL will review and revert

91	**SOW**	SOW 4.1.3.2 SOW 4.2.1.3 Notes 1-3 BOQ Item 12 Software Milestones 1-4 The OT Data Lake is to be provided by OIL and its sizing, storage, retention, performance and API specifications are under the CCC scope and will be shared during detailed engineering. The bidder is nevertheless responsible for DOF-to-OT-Data-Lake integration and end-to-end integration services, with early solution/data-foundation milestones.	Request OIL to provide a detailed responsibility/RACI matrix among OIL, CCC/OT Data Lake provider and the DOF bidder for the OT Data Lake integration. The matrix should identify responsibility for OT Data Lake environments/endpoints, storage and retention, MQTT/OPC UA/REST services, authentication/security, interface specifications and schemas, network/firewall connectivity, test data, credentials, performance/capacity and operational support. Please also provide the planned availability dates for DEV/SIT/UAT/PROD OT Data Lake interfaces and associated specifications, test data and access required to meet Software Milestones 2–4. Further, request OIL to amend/clarify the schedule, payment and LD provisions such that any delay to integration, testing, UAT or Go-Live attributable to non-availability, late availability or material change of OIL/CCC-controlled OT Data Lake interfaces, infrastructure, data, access or approvals shall		Oil will provide details during site survey

			result in a corresponding schedule extension and shall not attract LD or delay the bidder's otherwise-completed milestone payment. Any material change to the agreed OT Data Lake/API/interface specifications after design freeze that results in additional development, integration or testing effort should be addressed through the agreed change-control mechanism.		

92	**SOW**	SOW 4.2.1.3 Existing Yokogawa (10 wells) and Kelton (77 wells) cloud wellhead systems are to be integrated through SCADA/OT Data Lake, with historical and real-time data consolidated into the new platform and the incumbent cloud services decommissioned after successful integration.	Request OIL to clarify the exact population of existing wireless wellhead systems to be migrated/integrated, as SOW 4.2.1.3 identifies Yokogawa for 10 wells and Kelton for 77 wells (total 87 wells), while subsequent requirements refer to 90 wells. Please provide the final well-wise inventory, including RTU/modem/edge-device make, model, firmware/configuration and existing communication architecture. Please confirm that OIL will arrange the necessary access, credentials, incumbent-vendor cooperation and rights required to obtain existing system configurations and historical data from the Yokogawa/Kelton solutions. Please also define the historical-data volume, format, retention period and export mechanism to be provided for migration. Further, please define the migration/cutover approach, including any parallel-run period, data reconciliation/acceptance criteria, rollback requirements and formal OIL approval required before decommissioning the		OIL will review and revert

			incumbent cloud services. Since the detailed RTU/modem information will be provided only during detailed engineering, request OIL to clarify that any additional hardware, software licences, protocol converters or material integration effort identified after disclosure of the existing-system details and beyond the agreed bid baseline shall be addressed through the agreed change-control mechanism. Delays arising from non-availability of incumbent-vendor support, access, credentials or historical-data export should not be attributable to the DOF bidder.		

93	**SOW**	SOW 4.1.2 SOW 4.2.1.3 SOW 4.2.3 SCC Cl. 16 & 19 BOQ Item 12 Integration scope refers to OT Data Lake, SCADA, historian, SAP S/4HANA, GRPC, RTPMA, existing wellhead systems and 'other systems as required'. The bidder is responsible for adapters/connectors, while OIL states that SAP-integration software licenses will be arranged by OIL.	Request OIL to provide the definitive interface inventory for bid sizing, identifying each source/target system, interface owner, protocol/API, data scope/tags, data direction and frequency, authentication/security requirements, historical-data requirements and available test environment. Further, request OIL to amend/clarify that the bidder's base scope shall be limited to the agreed interface inventory. Any additional system introduced under “other systems as required,” or any material change to an agreed interface/API after design freeze, shall be handled through the agreed change-control mechanism with corresponding schedule and commercial impact. Please also specify the exact SAP integration software/components/licenses to be provided by OIL and identify any SAP-side configuration/development expected from the bidder.		The bidder shall integrate all systems expressly identified in the tender, including SCADA, OT Data Lake, historian, Well Head Monitoring, RTPMA, GRPC and SAP S/4HANA. OIL will arrange SAP-integration software licences. Detailed interfaces will be finalized during detailed engineering; only requirements beyond the contracted SOW follow change control.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
94	**SOW**	SOW 4.2.3 The bidder is responsible for QC and upload of all historical data archived on hard disk into PDMS, but the volume, period, formats, structure, metadata and existing data quality are not defined.	Request OIL to provide the historical-data migration inventory, including date range, approximate volume, file/database formats, source systems, well/asset coverage, metadata/tag dictionaries and expected data-quality condition. Please clarify that the bidder's base scope covers normal data extraction/mapping, QC, transformation and upload into PDMS. Any substantial manual reconstruction, digitization, creation of missing master data, correction of materially incomplete/corrupt data, or processing of additional historical datasets not included in the agreed migration baseline shall be handled through the agreed change-control mechanism with corresponding schedule and commercial impact. Please also confirm that model/workflow acceptance shall consider limitations arising from unavailable or inadequate historical data provided by OIL.		OIL will provide historical data in available form. It is in bidder's scope to digitize, transform and QC the data if required.

95	**SOW**	SOW 4.2.1.2 SOW 4.2.2 SOW 4.2.3 All tags and calculated variables must follow a canonical schema with consistent units, ranges and quality flags. The bidder must deliver tag dictionaries/metadata and auto-register tags across broker, SCADA, historian and DOF; PDMS also requires master-data/workflow setup.	Please clarify whether OIL/CCC will provide the authoritative asset hierarchy, tag naming convention, master identifiers, unit conventions, quality-code definitions and canonical data schema to be used across SCADA, historian, OT Data Lake and DOF. If these standards are to be developed by the bidder, please define the OIL approval authority and confirm the baseline source systems/master data to be used for mapping. Any substantial remediation of inconsistent, duplicate or missing source master data beyond the agreed baseline should be addressed through change control. Please also clarify ownership and governance of the approved canonical schema/tag dictionary after handover, including responsibility for future changes and onboarding of new tags/assets.		The bidder shall deliver the canonical schema, tag dictionary and metadata, and auto-register tags across the broker, SCADA, historian and DOF. The detailed naming, master-data and governance conventions shall be finalized with OIL during implementation.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
96	**SOW**	SOW 4.2.1.7-B SOW 4.2.12 Note The platform must continuously ingest, validate, process, store and make available data for 700 wells. The solution must also remain scalable to current and future wells during the contract tenure.	Please clarify the required well population at initial Go-Live. While the DOF solution is specified for 700 wells, only 380 wells are prioritized for sensorization. Please identify how data for the remaining wells will be made available (OT Data Lake/historian, existing systems, batch/manual source or subsequent onboarding) and the respective OIL/bidder responsibility. Further, request OIL to clarify/amend the requirement for onboarding future wells at no additional cost. The base contract should cover onboarding within the agreed platform sizing and licensing capacity. Any increase requiring additional cloud compute/storage, software licences, interfaces/connectors, data engineering or workflow/model configuration beyond the agreed baseline should be handled through change control. .		OIL will review and revert.

97	**SOW**	SOW 4.2.26 Note 2 SCC Cl. 20 (Public Cloud) A MeitY-empanelled public cloud may be offered. OIL has an Azure landing zone; traffic to the proposed public cloud must be routed through it. The bidder must factor data-transmission cost, required NGFW/VPN connectivity and federation/identity service for SSO with OIL Azure AD; OIL retains audit rights.	Please provide the responsibility matrix for public-cloud connectivity through OIL's Azure Landing Zone, clearly identifying OIL-provided and bidder-provided components/services, including Azure Landing Zone connectivity, NGFW/VPN/IPsec, certificates/keys, identity federation/SSO, security logging/audit integration and data-transfer/egress charges. Further, please clarify the requirement for OIL's "full access/audit right" to the bidder's cloud subscription. For proprietary/SaaS or shared cloud environments, request that compliance be satisfied through appropriate audit logs, security reports/evidence and agreed audit access without requiring administrative access to the bidder's shared cloud tenant/subscription.		Oil will provide infrastructure and connectivity to cloud. Clause will be modified.

98	**SOW**	SOW 4.2.1.1 to 4.2.1.7 SOW 4.2.5 to 4.2.12 AMC T&C Sl. 40-42 The SOW contains a hybrid architecture: local/edge control, cloud-based AI/analytics for several workflows, an OIL-provided OT Data Lake, time-series/feature-store analytics and application/database backup requirements. The tender does not state one consolidated deployment/data-residency matrix.	Request OIL to provide a component-wise deployment and data-residency matrix for PDMS, dashboards, SRP/Plunger/Gas-Lift/ESP analytics, Digital Well Integrity, VFM, IPSM, historian/time-series data, feature store, model store and application databases, identifying which components/data must remain within OIL OT/OT Data Lake and which may be hosted/persisted in the bidder's MeitY-empanelled public cloud. Please also define the required retention period for operational, historical, model and audit data, and clarify responsibility for backup and disaster recovery, including required backup frequency, RPO/RTO and associated infrastructure/storage.		OIL will provide the required resources including storage/compute etc in OIL's Azure environment and OIL will also take responsibility of the backup if the solution or scope demands. However, frequency of the backup as well as retention/type of backup etc will be discussed during the detailed engineering phase.

99	**SOW**	SOW 4.2.1.5 & 4.2.1.7 SOW 4.2.12 Note AMC T&C Sl. 21-23 The bidder must include all required compute and size the platform for contracted performance. Additional compute due to new use cases or increased well/user volumes beyond contracted SOW may follow change control. Elsewhere the solution must scale to future wells during the contract with no extra cost, and AMC requires scaling with user growth.	Request OIL to define the contracted platform sizing/growth envelope included in the bid, covering number of wells/users, tag/message rates, data volume and retention, cloud compute/storage, software licences, AI/ML workloads and simulation concurrency. Please clarify that "future wells/users at no additional cost" applies only within the agreed contracted capacity and licensing envelope. Any growth beyond this baseline requiring additional compute, storage, licences, interfaces, data engineering or model/workflow onboarding shall be handled through the agreed change-control mechanism with corresponding commercial and schedule impact. Please also clarify the threshold/criteria at which increased well, user or data volumes will be considered beyond the contracted SOW.		The contracted capacity includes 700 wells, at least 180 concurrent users, approved publishing frequencies, five concurrent simulation runs and the other benchmarks under Clause 4.2.1.7. The solution shall scale to future wells during the contract without extra cost; only requirements beyond the contracted SOW may follow change control.

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100	**SOW**	SOW 5 - AMC T&C Sl. 1-3, 9, 21-23 BOQ Items 16-20 SCC Cl. 21 AMC Year 1 is a fixed quarterly charge; Years 2-5 are paid on actual man-hour consumption (capped at 4,000 hours/year). However, the software solution requires continuous cloud/compute/storage, software licenses/subscriptions, security services, backup and platform availability throughout the AMC period.	Request OIL to amend/clarify the AMC commercial structure for Years 2–5 by providing a separate fixed recurring charge for non-labour software/platform costs, including cloud compute/storage, software/platform licences or subscriptions, security services, backup/DR and applicable data-transfer charges. BOQ Items 17–20 based on actual man-hour consumption should apply only to engineering/support services, while recurring platform/subscription costs should remain payable independently of actual man-hour utilization. Please also define which recurring services/costs are to be provided by OIL versus the bidder and the baseline capacity/usage included in the fixed AMC charge. Any increase beyond the agreed baseline should be addressed through change control.		OIL will review and revert

101	**SOW**	SOW 4.2.26 Note 3 SLA - Drift & Staleness Model drift monitoring is included in AMC. The tender states a maximum of four retraining cycles/year, but also requires retraining when drift occurs to retain accuracy; it further states that retraining beyond the stated assumption may be handled through change control. Drift SLA requires retraining/redeployment within 10 business days, subject to reference data and OIL approval.	Request OIL to clarify whether the maximum four (4) retraining cycles per year applies per AI/ML model/use case or collectively across the complete DOF solution. Please amend/clarify that retraining up to the stated annual limit is included in AMC, while any additional retraining beyond this baseline, including additional drift-triggered cycles, shall be handled through the agreed change-control mechanism. For the 10-business-day drift SLA, please confirm that the SLA clock shall exclude periods attributable to non-availability of OIL-controlled operational/reference data, validation or approval, provided the bidder has documented the dependency within the prescribed timeline.		Per Model

102	**SOW**	SOW 4.2.1.7-E SOW 4.2.20-4.2.21 SOW 9.3 Payment Milestones 3-4 Go-Live requires performance/capacity testing, model validation, SIT/SAT and formal UAT sign-off using OIL-approved production-representative datasets, user journeys, analytical workloads and simulation scenarios. The detailed workflow-by-workflow acceptance pack is not defined in the tender.	Request OIL to establish and jointly freeze, during the design/requirement-finalization stage, a workflow-wise acceptance matrix covering test datasets/scenarios, applicable KPI and calculation method, sample size/time window, pass/fail thresholds, responsible OIL approver, defect-severity criteria, re-test requirements and evidence required for SAT/UAT sign-off. Please clarify that acceptance and sign-off shall be performed workflow/module-wise against the agreed criteria, and that new or materially changed acceptance criteria introduced after design freeze shall be handled through change control. Further, delays or inability to complete testing arising from non-availability of OIL-controlled data, interfaces, environments or approvals should result in corresponding schedule relief and should not delay payment for otherwise completed/accepted deliverables.		Testing and acceptance shall use OIL-approved production-representative datasets, user journeys, analytical workloads and simulation scenarios. Applicable SOW KPIs and SCC SLA requirements remain unchanged. OIL-controlled dependencies may be considered under SCC B.7.0 where supported by evidence and accepted by OIL.

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103	**SOW**	SCC Cl. 2 & 4 SOW 5 - AMC T&C Sl. 3 Payment Milestones 5-6 The 60-month AMC includes a three-month Hypercare period after Go-Live, during which the implementation team provides application managed services. Payment Milestone 5 also releases the final implementation portion after 90 days post-implementation/stabilization, while AMC payment starts post Go-Live.	Please clarify the commercial and contractual treatment of the three-month Hypercare period following Go-Live. Specifically, confirm whether Hypercare is fully included within AMC Year 1 fixed charges, within the implementation/stabilization price, or apportioned between the two. Please also clearly identify the activities covered under Hypercare versus AMC Year 1 support, including application support, defect resolution, stabilization, monitoring, model/workflow tuning, user support and managed services, so that there is no overlap, double pricing or unrecovered scope.		OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
104	**SOW**	4.1.4.4.1 & Page # 113 VFD Supply	Please confirm VFD supply for 28 wells part of this DOF Tender Scope		Confirmed. The scope covers optimization of 28 ESP wells, and BOQ Item 25 specifies 28 ESP VFDs.
105	**SOW**	4.1.4.4.1 & Page # 113 VFD Capacity	Please advise about VFD capacity requirements (KVA) for all 28 VFD's.		OIL will review and revert
106	**SOW**	4.2.17 & Page # 151 Power Supply	What would be input power supply for VFD? Overhead Line or Generator		OIL will review and revert
107	**SOW**	4.2.17 & Page # 151 VFD Pulse	Please clarify VFD pulse requirement.		The ESP VFD shall provide variable-frequency PWM output, continuously from 30 Hz to 60 Hz, extendable up to 90 Hz if required.
108	**SOW**	4.2.17 & Page # 151 Harmonics Filter	Requirement to meet any specification, if required		The ESP VFD shall achieve minimum 96% efficiency and power factor ≥0.98 using built-in harmonic mitigation through a line reactor or active front end.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
109	**SOW**	4.1.4.4.1 & Page # 113 ESP Sensor interface	Company/ESP Supplier shall provide interface and connection cable to connect with VFD and further data transmission		The bidder shall provide all interfaces, cables and integration required to connect ESP sensors/controllers and VFDs with SCADA, historians and the DOF solution. Existing equipment details will be assessed during site survey and detailed engineering.
110	**SOW**	4.1.4.4.1 & Page # 113 Automatic Fallback	Clarify Automatic fallback to amp/load-based control if PI signal fails. Is this related to fluid fallback once ESP trips? If Pi (Intake pressure) & Pd (discharge pressure) signal is not available than fallback can be controlled via ESP backspining.		Automatic fallback means switching from intake-pressure control to amp/load-based control when the PI signal fails. Fallback operation shall remain within approved safe operating envelopes; the tender does not equate this requirement with backspin control.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
111	**SOW**	4.2.17 & Page # 151 Enclosure Rating	Please clarify if IP-55 is required or bidder can propose NEMA 3R rating enclosure		Tender specification prevails.
112	**SOW**	4.1.4.1.2 & Page # 103 VFD Capacity	Please confirm if all VFD required for 50 HP motor		OIL will review and revert
113	**SOW**	4.1.4.1.2 & Page # 103 Power Supply	What would be input power supply for VFD? Overhead Line or Generator		OIL will review and revert
114	**SOW**	4.1.4.1.2 & Page # 103 Harmonics Filter	Requirement to meet any specification, if required		The SRP VFD shall meet minimum 96% efficiency and power factor ≥0.98, and include the specified regenerative/braking arrangement and surge-protection features. No separate harmonic-filter specification is stated.
115	**SOW**	4.1.4.1.2 & Page # 103 Enclosure Rating	Please clarify if IP-55 is required or bidder can propose NEMA 3R rating enclosure		Tender specification prevails.

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
116	**SOW**	4.1.4.1.2 & Page # 103 Field Instrumentation	Generally Vibration sensor is not required and connected to VFD to monitor surface unit vibration. Surface unit vibration can be monitored by downhole dynacard interpretation and accordingly rectification can be done. Could you please elaborate if separate vibration sensor is required to detect surface pumping unit beam.		A separate vibration sensor is mandatory to detect surface pumping-unit beam vibration. It forms part of the required SRP field instrumentation and RPC monitoring inputs.
117	**BEC**	2.1 (A)	EXPERIENCE CRITERIA: Bidders should meet all the following experience criteria: (A) The bidder must have successfully executed/completed “Similar Works” in Oil & Gas sector during the last 15 (fifteen) years reckoned from the Original Bid Closing Date, as under:	Request to extend timeline from 7 to 15 years	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
118	**BEC**		The bidder must have successfully executed/completed "Similar Works" in Oil & Gas sector during the last 15 years reckoned from the Original Bid Closing Date, as under: (a) One similar work having executed value not less than INR 186,02,86,000.00; OR (b) Two similar works each having executed value not less than INR 116,26,79,000.00; OR (c) Three similar works each having executed value not less than INR 93,01,43,000.00. "Similar Works" shall mean implementation of Integrated DOF / IPO / Intelligent Field / Production Surveillance and Optimisation solution for upstream Oil & Gas assets in India or abroad, and should cumulatively include the stated areas.	Integrated Digital Oil Field / Intelligent Field solutions are typically delivered and sustained over several years through successive contracts awarded by the same operator for the same field. Bidder requests OIL to confirm that two or more successfully completed contracts shall be treated as one linked "Similar Work" where: (a) they were awarded by the same client to the bidder in continuity; and (b) they relate to the same field/asset and the same Integrated DOF / Intelligent Field solution, as shown by the contract title, scope of work or technical specification.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
119	**BEC**	2.1(A) note (i)	"Similar Works" shall mandatorily include PDMS; Remote Wireless Well Head Monitoring and Control; IPSM consisting of Material Balance Reservoir Modelling, Well Performance Model, Surface Network Modelling & Optimization, and Wax & Hydrate Deposition / Prediction Modelling. Additionally, it must cover at least three of: SRP or Plunger Lift Optimization; Gas Lift Optimization; ESP Optimization; AI-Based Digital WIMS; Virtual Flow Metering.	Bidder requests replacing the mandatory/additional split with a consolidated requirement covering at least 8 of 12 areas: Production Data Management; Remote Well Head Monitoring and Control; Virtual Flow Metering; Transient Multiphase Flow Simulation; Material Balance; Well Performance Modelling; Surface Network Modelling and Optimization; Hydrate Deposition / Prediction and Management; Digital WIMS; SRP or Plunger Lift Optimization; Gas Lift Optimization; and ESP Optimization.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	Remarks	OIL's Response
120	**BEC**		The bidder should have experience of successfully completing at least one project involving supply, installation, commissioning and integration of field instruments (measuring devices and/or wireless network devices) with an Integrated DOF / IPO / Intelligent Field / Production Surveillance & Optimisation solution in the production domain of the Oil & Gas sector in India or abroad, during the last 15 years reckoned from the Original Bid Closing Date.		OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-C

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter Local LCD display	We understand that LCD display requirement is asked for temperature transmitters and Flow meters only. However the display is not asked for wireless PT with remote seal and for wireless direct mount pressure transmitters. Please confirm if wireless PT (remote seal and Direct mount) to be quoted with display or without display.	Local display is required for pressure transmitter as well
2	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter Process pressure/Calibration range	Please provide Following: 1. Static pressure (min, max) 2. Calibration range details for all the tags	Tag-wise static and calibration ranges are not specified. These shall be finalized during detailed engineering based on process conditions

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal Remote seal: 5-meter length with armoured capillary. All accessories required to install the remote seal on the available process connection shall be provided by the bidder including nipple, counter flange etc	Please clarify the requirements of Nipple & counter flange in case bidder can offer Remote seal with threaded process connection. Please confirm whether 1/2" NPT-F process connection needs to be provided at instrument side or same shall be available at process side.	The process connection is 1/2-inch NPT(F). All accessories required to install the remote seal on the available process connection, including nipple and counter flange, isolation valve etc. are in bidder scope
4	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds: Thermowell /RTD	For Temperature Elements & Thermowells, please provide tagwise following details - 1) Temperature sensor insertion length & Thermowell insertion length 2) Thermowell Process connection	Thermowell insertion length shall be checked during detailed engineering. Tag-wise process connection and insertion details shall be finalized during detailed engineering
5	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds: Temperature transmitters	Please provide Calibration range details for all the tags	OIL will provide line size, Operating Pressure/Temperature and Maximum flow, Bidder has to considering sizing assumptions

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Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**SOW**	4.2.13.3 Material test certificates	Please note that Material Test Certificate shall be applicable for temperature sensors and thermowell. The same shall not be applicable for temperature transmitters.	OIL will review and revert
7	**SOR**	35. Wireless Gateways (redundant; antenna kits; cabling Wireless Gateways (redundant; antenna kits; cabling)	1. We understand that redundant gateway means redundancy of the gateway electronics (in the panel/JB), antenna (in the field), and cable between gateway and antenna. Kindly confirm our understanding. 2. Please confirm if the requirement is 100x2=200 nos. or 200X2=400no.s of redundant gateways	Redundant gateway means a redundant gateway arrangement with remote antenna, cable and accessories. Revised quantity will be shared. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SOW**	4.2.13.12 Flow meter for Gas lift with flow calculator Process details	1. Please provide tagwise following details to size for the Orifice a) Min., Max. & normal temperature, b) Min., Max. & normal pressure c) Min., Max. & norma flow details d) Line size and line schedule e) Gas composition, Density, Viscosity f) Pipe moc details 2. Please confirm if flanges for orifice also to be supplied by the bidder or the same shall be in Oil India scope. 3. Any hot work/cutting/welding in the field for Thermowell/ Orifice the shall be Oil India's scope. 3. Please confirm on the approved vendor list for orifice. 4. Please confirm availability of straight run of 10D at upstream and 5D at downstream 5. Please provide Temperature element length details	Tag-wise process data and sizing shall be finalized during detailed engineering. The bidder shall supply the complete flow-measurement package (Flow computer), flanges/accessories and all cutting/welding/installation work. The EDGE-enabled Autonomous Gas Lift Optimization (AGLO) system shall integrate a physics-based well and Gas Lift model within the Integrated Production System Model (IPSM) and shall use real-time well, gas-lift and production measurements to continuously determine the well operating state and optimize gas-lift operation. For each applicable Continuous Gas Lift (CGL) and Intermittent Gas Lift (IGL) well, the bidder shall provide, integrate and commission all instrumentation, actuators, EDGE hardware and communication interfaces required for measurement-driven closed-loop autonomous optimization

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
9	**SOW**	Installation scope Installation scope	The tapping point as per the process connection mentioned for all devices in relevant specifications of the Tender shall be provided by Oil India, in case of any modified process connections/tappings shall be found during installation, same shall be organized by Oil India to match the Tender specification.	Not accepted. All tapping, process/line modifications, cutting and installation required for the specified instruments are in bidder scope.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**SOW**	4.2.26 Statutory requirement: All electronic / electrical instruments and equipment to be used in hazardous area shall fulfil the following: • Relevant OISD standards complement DGMS regulations for instrumentation: o OISD-STD-137: Instrumentation in Hydrocarbon Industry o OISD-STD-116: Electrical Safety Practices • Item shall be of a type and specification conforming to the relevant standards as specified in the Regulation 107(2) of Oil Mines Regulation-2017 and complying the provisions therein. • All instruments used in hazardous locations must be flameproof, intrinsically safe (IS), or explosion-proof.	Emerson Transmitters shall be Calibrated & Tested as per Emerson standard. We will provide IECEX Intrinsic safety certfication as per Ex ia IIC, T4 alongwith PESO for Transmitters as well as for battery. The same has been considered in earlier execution.	Compliance shall be as per OMR 2017 and Clause 4.2.26. IECEx/ATEX/NABL.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		• Instrumentation and electrical systems shall have proper earthing and bonding, complying with relevant electrical standards in oil fields.		

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Sl. No.	Section	Clause Reference	Query	OIL's Response
11	**SOW**	5 ANNUAL MAINTENANCE – TERMS & CONDITIONS	Please confirm following: 1. We understand that for field instruments like PT, TT and all the SMV/Multivariable flowmeters /DPT are not required to be covered under AMC since spare for the same has been already asked by Oil India. 2. Wireless HART gateways do not have any inbuilt software and hence same is not required to covered under AMC.	OIL will review and revert
12	**SOW**	4.2.22 Warranty, Guarantee and Support	Warranty of supplied Goods shall be 12 months from the date of commissioning and 18 months from the date of shipment	OIL will review and revert
13	**SOW**	Annexure-A (Sensorization of 380 Wells)	We request the Location wise plinth details, Plinth-wise wells and its respective applicable instruments for each well head.	OIL will provide details

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**SOW**	Due date extension	We request to kindly extend the bid due date of Tender offer submission for 4 weeks from the date of receipt of last pre bid query reply.	BCD shall be extended suitably at OIL's discretion
15	**SOW**	Instrumentation in Phase-1 Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable)	Delivery of instruments shall be T1 + 11 month	Not accepted. FAT and supply timelines shall remain as specified under Clause 9.2
16	**SOW**	Annexure-A (Sensorization of 380 Wells) Self-Flow Well - Supply of Wireless Gauge Pressure Transmitter-344 Qty	As per the page 178/307, If this is an oil application, hope Remote seal PT to be considered? If Yes, in that case, please confirm if 5 mtrs capillary length to be considered?	YES.
17	**SOW**	Annexure-A (Sensorization of 380 Wells) Installations	Please clarify the mounting points for the Wireless Gauge Pressure Transmitter with remote seal (5m capillary length) and Wireless Temperature Transmitter with Temperature Element and Thermowell.	The process connection is 1/2-inch NPT(F). All accessories required to install the remote seal on the available process connection, including nipple and counter flange, isolation valve etc. are in bidder scope

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**SOW**	Annexure-B	For Rajasthan Fields - please clarify if the" Upcoming AL wells " are existing or non -existing in the current situation, need clarity for network planning	OIL will review and revert
19	**SOW**	Annexure-A (Sensorization of 380 Wells) Solar Panels for Well Plinths	Please confirm if the Qty is final and will be considered based on the Annexure -A Qty mentioned, hope this understanding is correct	Revised Annexure -A will be published.
20	**SOW**	Magnetic Flowmeter	Magnetic Tube is always a non-Wetted Part. Thus, standard MOC of SS304 is suitable and recommended.	Accepted. Corrigendum will be published.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
21	**SOW**	Mass Flowmeter (NOC) For crude despatch line	1. Line size is indicated as 4" / 6" / 8". Request to confirm exact line size where mass flowmeters are to be installed. 2. Qty is indicated as 2 Nos. (One working, one standby) in specification. As per Page No. 211 total Qty of Coriolis Mass Flowmeter is indicated as 11 Nos. Request to confirm if Total 22 Nos. Mass Flowmeters are to be considered in total considering standby or 11 Nos. qtys are to be considered. 3. As per tender it is indicated that mass Flowmeters are to be calibrated at calibration rig accredited to ISO 17025 and FCRI calibration is not required if calibration rig is accredited to ISO17025. FCRI calibration is optional if calibration certificate shall be provided as per ISO17025. – Need clarification 4. As per Specification bidder to supply only strainer and reducer expander (If required). Request to clarify if bypass line with strainer arrangement is required.	OIL will provide Line size, Operating pressure/temperature and maximum flow rate. Remaining details finalised during detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
22	**SOR**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	Please confirm that MPFM and Sand monitor is an integrated Solution together to Provide integrated MPFM output Providing Gas, Oil, Water and Sand flow rates.	Sand monitor and CIU will not be required.
23	**SOW**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please note that the Waxing & Crude build up should not affect Meter Performance. Thus the Meter body should be Full Bore Type, hope the understanding is correct	Tender specification prevails.
24	**SOW**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please confirm that MPFM should have Direct Density Measurement for Gas for better Overall Measurement Accuracy, Since Oil India wells are either Wet-Gas wells or Gas Lift Wells.	Tender specification prevails.
25	**SOR**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	Please Provide Process data to allow to perform MPFM sizing	Line sizes will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**SOW**	4.2.13.6 Water Cut Meter	Please Provide Process data to allow to perform WCM sizing	Water-cut meter size and process connection are not specified and shall be finalized during detailed engineering based on site/ process data. Line size will be provided.
27	**Forwarding Letter**	O Duration of the contract - 72 (Seventy-Two) months i.e. 12 months for implementation and 60 months for AMC.	Please note that - 1 year implementation is not feasible and minimum requirement is 3 years for installation and commissioning of instruments and RTU . This is from the date of drawing/ data sheet approval by client. S/w implementation/Go-Live is additional 1 year from here.	OIL will review and revert
28	**ITB**	31 Local conditions :Company (OIL) shall not permit any Changes to the time schedule of the Contract or any financial adjustments arising from the Bidder's lack of knowledge and its effect on the cost of execution of the Contract.	Any delay which are not attributable to us (example- Not getting shutdown of well or at installation areas as per pre-agreed schedule) may have additional time and price implication and to be concluded in a mutually agreeable manner during execution.	Tender provision remains unchanged. Delays beyond the bidder's control shall be considered only under the Force Majeure/SLA exclusion provisions, subject to documentary evidence and OIL's acceptance.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
29	**GCC**	30 LD - @ 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.	Kindly make for the "Undelivered portion" instead of calculating it on total contract value.	No change in GCC provision
30	**GCC**	 Warranty - 12/18 from the date of receipt of material. / Clear 18 months from the date of receipt of materials (both h/w and s/w.	Contradicting …pls refer next line.	No change in GCC provision
31	**SOW**	9.2 (Sr No 8) Warranty for installed instruments - On installed instruments and devices	1 year from the date of Solution Go-Live.	OIL will review and revert
32	**SOW**	4.1.1 Instrumentation Installation & Commissioning	Kindly share "Plinthwise well list "for each asset to estimate Wireless networking accessories, Solar panel, RTU/Edhe qty, Erection-installation h/w and services.	Well Plinth list to be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
33	**SOW**	Instrumentation Installation & Commissioning	Kindly share the instrument list for each ÖCS/GGS/Installation to estimate the BOM and erection hardware -installation services.	Revised Annexure -A will be published.
34	**SOW**	Instrumentation Installation & Commissioning	Kindly inform availability of power at each Well head and Installation.	For wellhead solar power shall be considered. For installations, 230 VAC power will be provided.
35	**SOW**	Instrumentation Installation & Commissioning	Please inform the details of SRP, Plunger- lift wells, ESP where in augmentation work to be done. Please share existing system details like - availability of VFD, Soft starter, DOL with their ratings -OEM, Data sheet to evaluate integration scope (Communication protocol and interfacing h/w, cable laying etc if hardwired signals to be interfaced with RTU/Edge). This is required for each panel /systems those to be integrated with proposed system.	Relevant available information will be shared. As discussed, site survey is suggested.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
36	**SOW**	4.1.4.1.5 Trend Viewer – Data Trend of operational data on Rod Pump Controller HMI. • HMI can be viewed remotely over webserver using 802.1X Authentication.	Do we need to consider any local HMI at wellhead panels? Or need to integrate any existing local HMI with proposed system for visualising remote operations in centralised dashboard ? How many such system have been envisaged - kindly share plinth wise well details .	A cabinet-mounted HMI/local display shall be provided at each production well/installation/facility for local monitoring and operation of the DOF system. The HMI shall provide a clear visualization of all key well operating, production, artificial-lift and control parameters and shall permit authorized personnel to monitor and, where applicable, adjust the relevant operating set points and control parameters. The EDGE device shall have direct access to all necessary real-time wellhead measurements, status signals and controllable parameters required for autonomous optimization and closed-loop control. These shall include, as applicable, wellhead pressure/temperature, casing pressure, flowline pressure, production rate, artificial-lift operating parameters, valve/control-device status, alarms and other critical wellhead parameters. A larger local panel/display may

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				be provided at the production installation/facility for centralized monitoring of multiple wells and equipment. In addition, the DOF platform shall provide web-based access through authorized computers/workstations for remote monitoring, visualization, diagnostics & analysis

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Sl. No.	Section	Clause Reference	Query	OIL's Response
37	**SOW**	4.1.4.2.1 The solution shall cover 75 wells, which includes 34 existing wells and 41 upcoming wells, with inherent provision for future instrumentation, well count expansion.	We understand that Instrument listed in Annexure A and B is including of these "Future instruments"'. Kindly confirm.	Revised Annexure -A will be published.
38	**SOW**	4.1.4.3 Gas lift optimisation-The solution shall cover all the 48 gas (continuous and intermittent) lift wells, with inherent provision for future instrumentation, well count expansion, and lift regime changes	We understand that Instrument listed in Annexure A and B is including of these "Future instrumentation, well count expansion and lift regime changes. Kindly confirm.	Revised Annexure -A will be published.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
39	**SOW**	4.1.4.3.2 FI Scope -The hardware scope shall include a comprehensive sensorization plan accounting for field layout, topography, environmental conditions, and site constraints. Optional wellhead and annulus sensors for enhanced diagnostics and stability monitoring .	We understand that list of instruments mentioned in Annexure A and B is including of all these sensors and instruments. Kindly confirm.	Revised Annexure -A will be published.
40	**SOW**	motor protection features where applicable, and configurable fail-safe modes for power and signal loss.	Please inform if you are planning for ESD/ SIL3 safety loop (and field hardware engineering) by mentioning "fail safe mode".	Only BPCS will suffice.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
41	**SOW**	4.1.4.3.3 Core Solution Requirements - The solution shall support progressive control, enabling transition from operator-assist advisory or supervisory modes to fully autonomous closed-loop control without requiring new permanent downhole sensors.	We understand, no downhole sensor is currently under bidder's scope. Please confirm.	Confirmed. No new permanent downhole sensors are mandated for progressive gas-lift control
42	**SOW**	4.1.4.4.1 28 wells (8 existing ESP wells and 20 upcoming wells).	We understand instrument list shared vide Annexure A and B is including of all required sensors and instruments and hardware for these ESP wells. Kindly confirm. Please share existing ESP details (data sheet of OEM, PBC/MCC panels, communication protocol, hardware signal etc.)	Annexure-A includes the stated ESP instruments. Relevant available information will be shared. As discussed, site survey is suggested.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
43	**SOW**	Bidder shall ensure that the complete cloud-based solution shall have 20% spare of I/O at gateway level, edge device level, RTU level and cloud infrastructure level.	We request OIL India to procure these from respective OEM 's directly and we shall assist to integrate those data in proposed platform.	OIL will review and revert
44	**SOW**	NOTE - 1 Bidder scope is limited to field instrumentation, Wireless HART/ISA100 networks, gateways, edge devices, and integration with the OT Data Lake through existing OIL SCADA servers.	We understand, this is applicable for the new FI signal integration approach point of view and not for the existing EDGE-RTU integration. Kindly inform.	The note applies to the DOF field and OT integration scope. Existing 90-well edge systems shall also be integrated as specifically required under Clause 4.2.1.3.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
45	**SOW**	NOTE 4 4. Telecom infrastructure between IoT & edge devices, including but not limited to LTE/4G/5G connectivity, network heat map assessment, licensed radio systems, microwave links, VSAT connectivity, leased lines, or associated recurring telecom charges will be managed by the bidder.	Except IOT and RTU, We request OIL to keep , all other things mention here, out of bidder's scope as SIM card etc to be purchased in OIL's name. Kindly evaluate.	Not accepted. The complete telecom infrastructure and recurring charges are in bidder scope
46	**SOW**	Remote Site Connectivity and Data Resilience The Bidder shall design, provision, operate and maintain the complete connectivity required for transmission of data between the field gateways/edge devices and the OT Data Lake/DOF platform, including all telecom equipment, routers, modems, antennas, SIMs, subscriptions, recurring charges, security components and associated services.	Confirm if SIM subscription in OIL's scope.	Not accepted. SIMs, subscriptions and recurring connectivity charges are in bidder scope

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Sl. No.	Section	Clause Reference	Query	OIL's Response
47	**SOW**	D. Bidder Sizing Submission	Please inform OT layer (Edge/ RTU, FI, Sensor, Gateway, Switches, F/w) level redundancy requirement.	Gateway, Antenna and interconnecting cables will be redundant. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.
48	**SOW**	4.2.5.1 The system shall support both integration with existing SCADA / Automation systems (via Modbus, or MQTT).	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope and OIL to please share details of existing SRP Panel to estimate augmentation/retrofit, integration BOM/ service.	Not accepted. Integration with existing SCADA is in bidder scope. Existing SRP panel details shall be assessed during site survey and detailed engineering.
49	**SOW**	4.2.5.1 The solution shall be designed as a true retrofit for legacy mechanical SRP units with Direct Online Starters or pump panels, requiring no major structural changes to the pumping unit itself.	OIL to please share details of existing SRP Panel to estimate augmentation/retrofit, integration BOM/ service.	Not accepted. Integration with existing SCADA is in bidder scope. Existing SRP panel details shall be assessed during site survey and detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
50	**SOW**	4.2.5.2 Integration, Security, and Operations -The solution shall integrate seamlessly with existing SCADA, historians, enterprise platforms, or Digital Oil Field (DOF) platforms via MQTT, providing local HMI for field operators, remote monitoring/visualization through dashboards, predictive alerts, and support for remote operations and predictive maintenance.	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
51	**SOW**	4.2.6.1 Plunger Lift Optimization Automate shut-in, build-up, open-flow, and after flow stages. Enable remote start/stop of cycles through plunger lift controller (RTU): MOV with fail-safe position. Solenoid-operated valve control. Local manual override.	WE understand that these instruments/hardware items have been included in Instrument list provided by OIL vide Annexure A and B. Kindly confirm.	OIL will review and revert. Complete controllers/accessories remain in bidder scope. The EDGE-enabled autonomous Plunger Lift (PL) and Plunger-Assisted Gas Lift (PAGL) optimization system shall integrate a physics-based PL/well model within the IPSM and use real-time wellhead, production and plunger-cycle measurements to continuously determine the dynamic well operating state and autonomously optimize PL/PAGL operating parameters. For each applicable well, the bidder shall provide, integrate and commission all necessary instrumentation, control devices, communication interfaces and EDGE hardware required for closed-loop autonomous operation. The EDGE shall continuously assimilate these measurements into the IPSM to estimate well state and optimize, as applicable, shut-in time, opening time, plunger arrival criteria, afterflow duration, cycle frequency and

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				PAGL gas-injection rate, pressure and timing. Following each cycle, predicted and measured responses shall be compared and the model parameters shall be automatically updated/recalibrated where required. The system shall support closed-loop autonomous operation, while retaining configurable operating limits, operator approval/override, manual mode and fail-safe shutdown/fallback logic. All measurements, model predictions, control actions, parameter changes, alarms and optimization decisions shall be recorded in the EDGE/DOF platform for monitoring, validation, auditability and continuous optimization.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
52	**SOW**	4.2.6.1 Plunger Lift Optimization Data Acquisition & Integration: SCADA/Telecom integration (Modbus TCP, MQTT, RTU).	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	OIL will review and revert
53	**SOW**	4.2.6.2 Enclosure, Panel, and Power The system shall support 24 VDC field power architecture, with power conditioning and optional backup power (UPS/battery) based on site needs	Pls share plinth wise availability of Power and existing power system details. UPS/ Battery back up time, redundancy design ?	For wellhead solar power shall be considered. For installations, 230 VAC power will be provided.
54	**SOW**	4.2.6.6 Reliability, Fail-Safe, and Degraded Operation Fail-safe behaviour of production valves, choke valves, and automated auto-catcher shall be configurable per operating scenario and aligned with the Operator's safety philosophy.	Do we need to consider any hardware redundancy here? Pls advise.	Redundancy will be applicable Gateways, Antennas and interconnecting cables. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
55	**SOW**	4.2.7-Gas-Lift Optimization & AGLO The I/O system shall support hot-swappable modules (where feasible) to reduce downtime during maintenance. The platform shall support redundancy options (as required by site criticality), including redundancy for CPU, power supply, communications, and I/O modules.		Hot-swappable I/O and redundancy options shall be provided as specified in Clauses 4.2.7.1 and 4.2.7.2.RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites. Clause will be modified.
56	**SOW**	4.2.8-ESP Optimization Data Integration & Connectivity: Integrate with SCADA and DCS systems, Historians, VFD controllers and ESP sensors	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
57	**SOW**	4.2.12-Visualization, Reporting & Decision Support Note: The bidder must ensure that the solution remains fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications beyond the contracted value.	We understand, this is intended from software point of view and not meant for hardware that will be required for well addition. Kindly confirm.	700 wells is the cap for the solution.
58	**SOW**	4.2.24-Software Maintainability Requirements c. During the contract period and its extension if any, if the systems require operating system, software release upgradation and same is necessarily required then it shall be provided without any additional license, service cost implication to OIL.	Kindly remove Upgrade from scope.	Not accepted. Upgrades, updates, bug fixing and enhancements are part of O&M after Go-Live

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
59	**SOW**	d. SOFTWARE ENHANCEMENT & SOFTWARE SUPPORT INCLUDING MINOR CHANGES IN GRAPHICS: S/W upgrade…	Kindly remove Upgrade from scope.	Not accepted. Upgrades, updates, bug fixing and enhancements are part of O&M after Go-Live
60	**SOW**	4.2.25-Instrument Maintainability Requirements a. The list of spares and details of activity for any type of maintenance are to be mentioned by the Bidder and must be agreed with OIL at the start of contract / project kick-off.	We understand that the required spares will be consumed from 10% spare as mentioned vide clause b below in this section. Any additional spare shall have additional cost implication and to be procured by OIL additionally.	Oil will review and revert
61	**SOW**	b. Bidder shall maintain 10% spares of the field instruments, edge devices & RTUs, deployed as part of the solution provided by OIL, in case of any emergency or regular maintenance breakdown.	Same as above	Oil will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
62	**SOR**	54- Migration of Instruments -Migration of instruments from one location to another per site Lumpsum 30	We understand, 30 instruments per site/location may have to be migrated in total contract period. Instruments means those shall be supplied by the bidder and not existing instruments/equipment. Kindly confirm. We understand note in Page 227 is applicable here. Kindly confirm.	Each Asset/Field
63	**SOW**	5.- AMC T&C Bidder shall be responsible for payment of cellular SIM card charges of the EDGE device during the AMC period and the same shall be included in the AMC invoice.	Pls take SIM and charges in OIL's scope.	Not accepted. Cellular SIM charges during AMC are in bidder scope and shall be included in AMC invoices
64	**SOW**	6 Bidder shall provide Oil India Limited a list of critical spares before completion of installation and commissioning for Gateway, Edge Device, RTU, Solar Panel based Power System.	Kindly inform if this is additional to the 10% spare mentioned in page no 160/307, clause no a & b. And if yes, kindly inform if this spare will be part of evaluation or not.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
65	**SOW**	COMMERCIAL CHECK LIST, point no. 5 SAC Code: GST %	Hope GST will be considered as 18% for supply and services. Kindly confirm	Bidder to quote applicable GST.
66	**SOW**	4.2.7.3.4 Actuated choke / control valve	Please provide the detailed specification and process data like: 1.Type of valve-pneumatic/Electrical/Hydraulic 2. Fail position 3. Line size/ pipe size 4. Media with detail composition 5. Flow rating - Min, Operating, Max. 6. Pressure - Min, Operating, Max. 7. Temperature - Min, Operating, Max.	OIL will provide line size, Operating Pressure/Temperature and Maximum flow, Bidder has to considering sizing assumptions

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
67	**SOW**	Annexure-A The quantity of instruments provided in the above list is tentative and may change. Bidders will have to visit OIL sites before price bid to assess the availability of instruments in field and the subsequent instrumentation requirement in order to achieve autonomous optimization as per their software. For crude oil application please consider Remote Seal type pressure transmitter	We are considering the instruments as per the BOM. Any changes to instrument quantities will be billed accordingly.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-D

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**ITB**	ITB 12.2	Clause 12.2 recommends site visits. Please confirm the mechanism, window and point of contact for site visits at Duliajan, Guwahati and Jodhpur.	Site visits shall be coordinated through OIL's designated representatives. Bidders may contact the contractual and technical contacts specified in SCC Clause 22.0. Bidders are advised to visit OIL's sites before bid submission.
2	**SOW**	SOW 4.2.14; 4.2.15; 4.2.16	Please provide process datasheets and P&IDs for actuated choke valves, actuated production valves and auto-catchers: line size, pressure class, CV range, fluid data. Confirm compatibility of existing lubricators with automated auto-catchers, and who performs the well intervention.	OIL will provide line size, Pressure/Temperature range, Max flow rate and H2S data.
3	**SOW**	SOW 4.2.13.7 (Site conditions note)	Will OIL provide existing vibration survey data for the crude dispatch lines downstream of CODP, or is the bidder to perform the survey during the pre-bid site visit? Please define the acceptance basis for meter accuracy under vibration.	The bidder shall assess vibration during the mandatory site visit and engineer suitable supports and mitigation. The specified meter accuracy shall be achieved under actual field conditions.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**SOW**	SOW 4.2.19 items 1, 2, 5; SOW 4.2.18	Confirm the process for shutdown windows, hot-work permits and CISF entry passes at 214 plinths and 11 installations, how much advance notice OIL will give of an approved shutdown window, and that production deferment arising from OIL-scheduled shutdown availability is not to the bidder's account.	OIL will provide site access subject to normal security and safety procedures. The bidder shall obtain CISF entry and daily work permits. Shutdown/permit-related exclusions shall apply only as provided in the SLA and subject to OIL verification. Minimum 7 days notice to be provided. Bidder has to maintain hinderance register.
5	**SOW**	SOW 4.2.13.8	Clause 4.2.13.8 requires the wireless gateway to be redundant. Confirm whether redundant RTUs and edge controllers are also to be supplied, and at which sites.	Gateway, Antenna and interconnecting cables will be redundant. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.
6	**SOW**	SOW 4.2.1.7 A-D	Please provide the expected real-time data transmission time frequency and data retention period.	Will be provided during detail engineering phase.
7	**SOW**	SOW 4.2.10 (accuracy targets)	With only 11 MPFMs and periodic test-separator data available, confirm the well-test frequency since this will be used for VFM calibration.	Well test frequency would be atleast monthly once.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SOW**	Note 3 to SOW 4.2.26 vs KPIs in 4.2.8 and 4.2.9	Please reconcile the 'accuracy level of 95%' for retrained AI models with the module KPIs (gas-lock detection precision and recall at or above 80%; barrier state classification at or above 90%). Confirm that KPIs are conditional on OIL-supplied data quality.	OIL will review and revert.
9	**SOW**	SOW 4.2.1.1	Please provide the current communication topology and available connectivity at each well/site, including cellular coverage, MPLS connectivity, bandwidth, latency and locations where redundant communication paths are currently available.	OIL will provide site wise well list, bidder has to assess connectivity for the same.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**SOW**	SOW 4.1.2	Will OIL provide the technical details of the existing OT Data Lake, SCADA, Historian, GRPC and RTPMA environments, including vendors/products, versions, available APIs/interfaces, data formats and authentication mechanisms?	The tender identifies the relevant systems, data sources, communication protocols, and standard interfaces required for system integration. The bidder shall demonstrate the technical capability and flexibility to integrate with OIL's existing and planned OT/IT infrastructure. Detailed OT Data Lake architecture, API specifications, data models, communication protocols, RTU/modem configurations, and other interface details shall be finalized and provided during the detailed engineering stage. The proposed solution shall be open, scalable, interoperable, and capable of accommodating the finalized integration requirements without fundamental redesign of the solution architecture.
11	**SOW**	SOW 4.1.2 / 4.2.1	Will OIL provide an indicative list of data sources, tag counts, historical data volumes, sampling frequencies and expected real-time ingestion rates for the DOF platform?	The bidder shall size the solution based on 700 wells and the performance benchmarks under Clause 4.2.1.7. Detailed tag volumes and publishing assumptions shall be validated during detailed engineering.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**SOW**	SOW 4.1.2	Please confirm the volume of the historical-data that shall be migrated/onboarded.	OIL will provide available historical data in available form, bidder has to digitize, convert, and migrate required data to achieve required accuracy.
13	**SOW**	SOW 4.1.2	Please clarify OIL's responsibility for historical-data quality and the Bidder's expected responsibility for data cleansing, reconciliation and correction of missing or inconsistent historical records.	OIL will provide available historical data in available form, bidder has to digitize, convert, and migrate required data to achieve required accuracy.
14	**SOW**	SOW 4.2.18	Please clarify whether OIL will provide permits, isolation/depressurization, gas-free certification and operational support required for hot/cold work and instrument installation, while the Bidder provides manpower, tools and execution.	The bidder shall obtain the required work permits and execute all installation activities. OIL will provide site access and operational coordination subject to safety and security procedures.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**SOW**	SOW 4.2.8	For the requirement of ≥30% reduction in PI excursions and ≥5% energy-intensity improvement for ESP optimization, please define the baseline period, comparison methodology and treatment of changes in reservoir/well operating conditions.	OIL will review and revert.
16	**SOW**	SOW 4.2.21	Please define the criteria under which Go-Live may be approved with less than 100% of field installations completed and how the corresponding milestone payment percentage will be calculated.	OIL will review and revert.
17	**SOW**	SOW / BOQ Item 14	The BOQ specifies web-based access for 150 users. Please clarify whether these are 150 named users or 150 concurrent users.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**SOW**	SOW 4.2.23 / Demobilization	Please clarify the required handover scope for source code. Does the requirement apply to custom-developed components/configurations specifically developed for OIL?	Demobilization includes handover of source code, repositories, configurations, deployment scripts, model artefacts, training pipelines and documentation as specified in SCC Clause 11.0. Source Code for COTS application is not required to be shared.
19	**SOW**	SOW 4.2.23 / Demobilization	Does the Bidder handover pre-existing proprietary/COTS platform source code and underlying intellectual property?	No. COTS software/application does not mandate sharing of the source code.
20	**Forwarding Letter**	Part-1 (Forwarding Letter) Clause 2.0 (o) & Part-4	Clarify if the 60-month AMC period commences only upon formal issuance of the Final Acceptance Certificate (FAC) following full operational integration. Timelines & Revenue: The projects starts getting implemented in a phase wise manner and waiting for the last well to be commissioned for FAT clearance will make it really difficult as it happened in 77 wells tender.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
21	**ITB**	Part-2 (ITB) Clause 26.1 & 26.6	Request permission to submit separate PBGs for (a) Implementation Phase (12 months) and (b) AMC Phase (60 months), or allow annual bank guarantee renewals. Financial: Locking up a single 5% PBG for 6.25 years ties up banking lines and inflates BG issuance charges significantly over time.	OIL will review and revert
22	**BEC**	Part-3 (BEC) Clause 8.2 & 8.3	Request relaxation of the strict 7-day post-bid window for submitting TPI-verified certificates, expanding it to 14–21 business days. Timelines & Eligibility: 7 days is extremely tight to complete global TPI audits of overseas experience certificates, creating a risk of unjust technical rejection.	No change

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Sl. No.	Section	Clause Reference	Query	OIL's Response
23	**BEC**	PART-3 BID EVALUATION CRITERIA (BEC) 2.1 EXPERIENCE CRITERIA	Request to Lower the Experience Criteria to 50% and make the following Changes: Bidders should meet all the following experience criteria: (A) The bidder must have successfully executed/completed 'Similar Works' in Oil & Gas sector during the last 7 (seven) years reckoned from the Original Bid Closing Date, as under: (a) One (01) similar work having executed value not less than INR 120,02,86,000.00 OR (b) Two (02) similar works each having executed value not less than INR 80,26,79,000.00 OR (c) Three (03) similar works each having executed value not less than INR 63,01,43,000.00	OIL will review and revert
24	**BEC**	Part-3 (BEC) Clause 5.14	Provide an exhaustive list of approved hardware items under List-16, and clarify if change in duty structure mid-project is subject to price adjustment. Financial: Prevents un-budgeted import duty liabilities and margin erosion on imported sensor/wireless hardware items during deployment.	To be guided by the provision stipulated in the tender

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Sl. No.	Section	Clause Reference	Query	OIL's Response
25	**SCC**	Part-4 (SCC)Liquidated Damages / SLA	Clarify the capping structure on Liquidated Damages (LD) for implementation delays vs. operational downtime penalties during the 60-month AMC. Financial Risk: Caps overall contractual LD liability (typically 10% max) to safeguard against disproportionate financial penalties during unexpected field outages.	To be guided by the provisions stipulated in the tender
26	**SOW**	9.2 Instrumentation in Phase-1	Based on our practical experience executing the 77-well project, the proposed target timeline—specifically completing FAT within 4 months (T1 + Month 4), Site Supply within 1 month post-FAT (T1 + Month 5), and Installation/Commissioning within 1 month (T1 + Month 6)—is theoretical and unrealistic given on-ground site conditions, logistics, and operational constraints. We request a detailed pre-bid discussion to revise and extend these milestone timelines to reflect actual field execution realities and prevent operational bottlenecks.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
27	**SCC**	Part-4 (SCC) Mobilization Period	12-month total implementation duration starting from Contract Signing / LOA date. Clarify whether the 12-month timeline starts immediately upon LOA issuance or post-completion of initial survey and site readiness sign-off by OIL. Timelines: Delays in site handover, civil work, or network readiness by OIL could compress the vendor's actual execution window.	The implementation timeline shall start from LOA date
28	**SCC**	Part-4 (SCC) Milestone Schedule	Integrated 12-month schedule covering FRS, Hardware Procurement, SITC, and Go-Live. Request a detailed, milestone-by-milestone breakdown (e.g., M1: FRS Approval, M2: Hardware Delivery, M3: Integration, M4: Go-Live) with predefined delivery dates. Timelines & SLA: Prevents arbitrary liquid damage (LD) claims for intermediate delays if overall project Go-Live remains on track.	The milestone-wise implementation schedule is specified under Clauses 9.1 to 9.3 and the payment milestones. OIL will review and revert on Tender timelines.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
29	**SCC**	Part-4 (SCC) Site Access & Handover	Physical deployment across operational fields in Assam and Arunachal Pradesh. Clarify OIL's timeline commitment for providing physical well-site access, operational permissions, and shutdown windows needed for sensor installation. Timelines: Prevents field deployment bottlenecks due to restricted wellhead access or delayed operational permits.	OIL will provide access subject to normal security and safety procedures. Permits and shutdowns shall be coordinated with OIL; accepted delays beyond bidder control shall be governed by the SLA exclusions
30	**SCC**	Part-4 (SCC) Testing & Acceptance Phase	Final Operational Acceptance Testing (OAT) prior to Go-Live. Specify the exact duration (e.g., 30 days) allocated for User Acceptance Testing (UAT) within the overall 12-month schedule, and define criteria for deemed approval if feedback is delayed. Timelines & Payment: Ensures project milestone completion isn't stalled indefinitely awaiting user sign-off.	UAT and sign-off are due by T1 + Month 10. The tender does not prescribe a separate 30-day UAT period or deemed-approval mechanism

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
31	**SCC**	Part-4 (SCC) OEM Delivery Lead Times	Supply of specialized sensors, remote terminal units (RTUs), and wireless hardware. Request provision for timeline extension without LD penalties in the event of global supply chain disruptions or microchip shortages affecting OEM equipment delivery which is not in the control of bidder. Execution & Financial: Protects vendor from force majeure-like global procurement lead-time spikes.	Extensions are governed by the Force Majeure and SLA exclusion provisions. Supply-chain delays are not automatically exempt unless they qualify under the tender and are accepted by OIL
32	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter	OIL to confirm if wireless PT (remote seal and Direct mount) to be quoted with display or without display because Tender is asking LCD requirement for temperature transmitters and Flow meters only	Display is required for pressure transmitter as well.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
33	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter	OIL to confirm: 1. Static pressure(min, max) ranges: 2. Calibration range details for all the Instrument tags:	OIL will provide Line size, Operating pressure/temperature and maximum flow rate.
34	**SOW**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal	Request OIL to clarify the requirements of Nipple & counter flange in case bidder can offer Remote seal with threaded process connection. Please confirm whether 1/2" NPT-F process connection needs to be provided at instrument side or same shall be available at process side.	The process connection is 1/2-inch NPT(F). For remote-seal transmitters, all installation accessories, including nipples and counter flanges, are in bidder scope
35	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds:	We request OIL for Temperature Elements & Thermowells, please provide tagwise following details - 1) Temperature sensor insertion length & Thermowell insertion length 2) Thermowell Process connection	Thermowell insertion length shall be checked during detailed engineering. Site-specific process connection and insertion details shall be finalized during detailed engineering

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
36	**SOW**	4.2.13.3 Temperature Transmitters for wellheads and manifolds:	We request OIL to please provide Calibration range details for all the tags	Other than during the guarantee period, the Vendor shall be responsible for instrument calibration and primary maintenance throughout the contract period. 1. The scheduled calibration frequency for all instruments and MPFMs shall be once every year. 2. Any performance drift or deviation observed in instruments/meters during normal operating conditions shall be promptly addressed by the Bidder, including necessary calibration, adjustment, testing, and restoration of the instrument/meter to the specified performance accuracy, at no additional cost to OIL.
37	**SOW**	4.2.13.3	OIL to please note that Material Test Certificate shall be applicable for temperature sensors and thermowell and for TT this is not applicable. Hope this is clear	Material Certificates to EN 10204 3.1 are required as applicable for the supplied assembly, including sensor and thermowell

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
38	**SOW**	35. Wireless Gateways (redundant; antenna kits; cabling	1. We request OIL to please confirm that redundant gateway means redundancy of the gateway electronics (in the panel/JB), antenna (in the field), and cable between gateway and antenna. Kindly confirm our understanding. 2. Please confirm if the requirement is 100x2=200 nos. or 200X2=400no.s of redundant gateways	1. Gateway, Antenna and interconnecting cables will be redundant. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites. 2. Revised Annexure A will be published.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

39	**SOW**	4.2.13.12 Flow meter for Gas lift with flow calculator	1. Please provide tagwise following details to size for the Orifice a) Min., Max. & normal temperature, b) Min., Max. & normal pressure c) Min., Max. & norma flow details d) Line size and line schedule e) Gas composition ,Density, Viscosity f) Pipe moc details 2. Please confirm if flanges for orifice also to be supplied by the bidder or the same shall be in OIL scope. 3. Any hot work/cutting/welding in the field for Thermowell/ Orifice the shall be OIL's scope. 3. Please confirm on the approved vendor list for orifice . 4. Please confirm availability of straight run of 10D at upstream and 5D at downstream 5. Please provide Temperature element length details	OIL will provide Line size, Operating pressure/temperature and maximum flow rate. Remaining details finalised during detailed design.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
40	**SOW**	Installation scope	The tapping point as per the process connection mentioned for all devices in relevant specifications of the Tender shall be provided by OIL, in case of any modified process connections/tappings shall be found during installation, same shall be organized by OIL to match the Tender specification.	Not accepted. All associated pipeline cutting, modifications, tapping, installation and commissioning are in bidder scope under Clause 4.2.18
41	**SOW**	4.2.26 Statutory requirement:	Transmitters will be provided with IECEX Intrinsic safety certification as per Ex ia IIC, T4 alongwith PESO for Transmitters as well as for battery. Hope this understanding is correct	Hazardous-area instruments shall comply with OMR 2017 and Clause 4.2.26. IECEx/ATEX/NABL or permitted test reports and applicable statutory approvals shall be submitted

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
42	**SCC**	5 ANNUAL MAINTENANCE – TERMS & CONDITIONS	Please confirm following: 1. Please confirm that field instruments like PT, TT and all the SMV / DPT are not part of the AMC as spare for the same has been already asked by OIL. 2. Wireless HART gateways do not have any inbuilt software and hence same is not required to covered under AMC.	OIL will review and revert.
43	**SOW**	4.2.22 Warranty, Guarantee and Support	Please confirm that the Warranty of supplied Goods shall be 12 months from the date of commissioning and 18 months from the date of shipment	OIL will review and revert.
44	**SOW**	Annexure-A (Sensorization of 380 Wells)	We request OIL for the Location wise plinth details, Plinth-wise wells and its respective applicable instruments for each well head.	OIL will provide details
45	**SOW**	Due date extension	We request OIL to kindly extend the bid due date of Tender offer submission for 4 weeks from the date of receipt of last pre bid query reply.	BCD will be extended suitably at OIL's discretion

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Sl. No.	Section	Clause Reference	Query	OIL's Response
46	**SOW**	Instrumentation in Phase-1	We request OIL for Delivery of instruments shall be T1 + 11 month. Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable)	Not accepted. Instrument FAT, supply and installation timelines shall remain as specified under Clause 9.2
47	**SOW**	Magnetic Flowmeter	Please note that the standard tube material for magnetic flowmeter is SS304 and flow tube as well as flange is not wetted part for magnetic flowmeter. Need clarification if SS304 flow tubes can be offered as SS316L is a non-standard requirement.	SS 304 is acceptable.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

48	**SOW**	Mass Flowmeter (NOC) For crude despatch line	**1.** Line size is indicated as 4" / 6" / 8". Request to confirm exact line size where mass flowmeters are to be installed. **2.** Qty is indicated as 2 Nos. (One working, one standby) in specification. As per Page No. 211 total Qty of Coriolis Mass Flowmeter is indicated as 11 Nos. Request to confirm if Total 22 Nos. Mass Flowmeters are to be considered in total considering standby or 11 Nos. qtys are to be considered. **3.** As per tender it is indicated that mass Flowmeters are to be calibrated at calibration rig accredited to ISO 17025 and FCRI calibration is not required if calibration rig is accredited to ISO17025. FCRI calibration is optional if calibration certificate shall be provided as per ISO17025. – Need clarification **4.** As per Specification bidder to supply only strainer and reducer expander (If required). Request to clarify if bypass line with strainer arrangement is required.	OIL will provide Line size, Operating pressure/temperature and maximum flow rate. Remaining details finalised during detailed design.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
49	**SOW**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	We understand from the specification that the MPFM and Sand monitor is an integrated Solution to ensure integrated MPFM output Providing Gas, Oil, Water and Sand flow rates. Please confirm	Sand monitor and CIU are not required.
50	**SOW**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please confirm that the Meter body should be Full Bore Type. Please note that the Waxing & Crude build up should not affect Meter Performance.	Tender specification prevails.
51	**SOW**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please confirm that MPFM should have Direct Density Measurement for Gas for better Overall Measurement Accuracy, Since OIL wells are either Wet-Gas wells or Gas Lift Wells.	Tender specification prevails.
52	**SOW**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	Process data is not provided to allow us to perform meter sizing. If process data is currently not available , OIL to advise the preferred meter size for the 11 units of MPFM.	Relevant available data will be provided.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
53	**SOW**	4.2.13.6 Water Cut Meter	Process data is not provided to allow us to perform meter sizing. If process data is currently not available, OIL to advise the preferred meter size for the 34 units of WCM.	Relevant available data will be provided.
54	**SOW**	SOW Cloud Subscription Clause 2.0.0 — SSO via Azure AD & Azure-specific security stack	Mandating 'Azure AD' by product name for SSO, plus IPsec connectivity specifically to the Azure Landing Zone, compounds the lock-in in Query 5 across identity AND network-security layers. This leaves no architectural layer where a non-Microsoft CSP can compete on equal terms. Naming specific proprietary products (Azure AD, Azure LZ) where functional specifications would suffice is inconsistent with vendor-neutral procurement principles under CVC guidelines. (a) Will OIL accept enterprise SSO federation via any SAML 2.0 / OIDC-compliant identity provider rather than mandating Azure AD specifically? (b) Will OIL amend the clause to specify FUNCTIONAL requirements ('secure encrypted connectivity to OIL network', 'enterprise identity federation') instead of Microsoft product names? (c) Please confirm	OIL will provide the required infra in OIL's Azure environment. Accordingly, OIL's Azure identity to be leveraged for SSO.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			whether the cumulative effect of Azure LZ + Azure AD + IPsec-to-Azure mandates is intended to constitute a Microsoft-Azure sole-source requirement.	

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
55	**SOW**	SOW 4.1.1 — OT Data Lake (On-Prem) vs Cloud DOF Application (Architecture Split)	The architecture mandates an on-prem OT Data Lake, edge-local deterministic control, AND a cloud-hosted analytics/AI platform routed through Azure LZ — a complex hybrid spanning field, edge, on-prem and cloud tiers. The interface/ownership boundaries between the on-prem OT Data Lake and the cloud DOF application are not fully specified, creating scoping ambiguity and integration risk. **(a)** Is the on-prem OT Data Lake an existing OIL asset or to be supplied by the bidder? If existing, please share its make/model, capacity and interface specifications at pre-bid stage. **(b)** Please define the exact data-flow and ownership boundary between the on-prem OT Data Lake and the cloud DOF application, including which party owns the historian. **(c)** What are the committed WAN bandwidth and availability figures between field/edge, on-prem OT Data Lake and cloud, so bidders can size store-and-forward and redundancy accurately?	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
56	**SOW**	SOW Clause 4.1 (Solution Description); Annexure-A (Sensorization of 380 Wells); SOR/BOQ instrument quantities; Clause 10.0 (Concurrent Users)	OBSERVATION: (i) The obligation to onboard "any future wells... without any extra cost" is open-ended and unbounded — it cannot be priced deterministically and will drive contingency loading or downstream disputes. (ii) There is ambiguity between 700 wells (intended coverage), 380 wells (prioritized sensorization) and the discrete BOQ instrument counts; bidders require one authoritative basis on which to quote the lumpsum software modules and the instrumentation. QUERY: **(a)** Please define an upper bound (well count / data volume / concurrent users) for the "no extra cost" future-onboarding obligation, or confirm that wells beyond the priced scope will be compensated via a rate card / change-order mechanism. **(b)** Please reconcile the 700 vs 380 well figures with the BOQ instrument quantities and confirm the exact scope basis (well and instrument counts) on which the lumpsum software modules and hardware must be quoted. **(c)** Please confirm whether software licensing/sizing (50/120/10 users, "scalable to all wells") is capped at 700	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			wells or must be provisioned as unlimited.	

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-E

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**Forwarding Letter**	Forwarding Letter 2.0(b) and 3.5	Extension of bid closing date Bidders will need to complete several steps after the post pre-bid addendum is issued: third-party certification of experience documents, formation and notarisation of consortium arrangements, and the mandatory site visits. We therefore kindly request OIL to extend the bid closing date by at least six weeks from the date of the post pre-bid addendum.	BCD will be extended suitably at OIL's discretion

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
2	**BEC**	BEC 2.1(A), 2.1(B), 2.1.2(II)(i) and (ii), 2.1.3, 3.3(iii), 7.1.3; SCC 14.0	Experience criteria in a consortium or joint venture a) Kindly confirm that, in a consortium or joint venture, the experience criteria under BEC 2.1(A) and BEC 2.1(B) may be met by different members, with each member executing the portion of work that corresponds to its experience. b) Kindly confirm that such a division of work among consortium or JV members, as set out in the consortium agreement, will not be treated as sub-contracting under SCC 14.0. c) BEC 2.1.3, 3.3(iii) and 7.1.3 refer to a "supporting company". Kindly clarify how these references apply. We also respectfully request OIL to consider allowing a wholly owned subsidiary to qualify on the experience of its parent company.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**BEC**	BEC 2.1.2(I)(iv), 2.1.2(II)(xiii) and 2.1.4	Meaning of "Principal" Kindly confirm that original equipment manufacturers and software licensors who supply products or licences to more than one bidder, under supply or licence agreements, and who are not JV partners, consortium members or providers of experience, are not treated as a "Principal" under BEC 2.1.2(I)(iv) and 2.1.2(II)(xiii).	Confirmed; However, the referred OEM/Software Licensors shall not be a bidder or supporting company of the bidder to meet the requisite experience criteria.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**SOW**	SOW 4.2.1.3, Note 3	OT Data Lake interface The SOW states that OT Data Lake sizing, retention, performance requirements and API specifications will be made available during detailed engineering under the CCC scope. Kindly: a) share the interface details available at present, including ingestion protocol, APIs, tag model and security requirements; b) indicate the current status and expected availability of the CCC and OT Data Lake system; and c) confirm that delays or interface changes arising from the CCC and OT Data Lake contract will be excluded from liquidated damages and SLA penalties under this contract.	OT Data Lake sizing, retention, performance requirements and API specifications will be provided during detailed engineering under the CCC scope. Integration shall be executed as per the tender; LD/SLA exclusions shall apply only where expressly provided under the contractual provisions

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**SOW**	SOW 5.0, 4.2.25 and AMC payment note	Non-labour costs during AMC Years 2 to 5 During AMC Years 2 to 5, payment is based on man-hours consumed, up to 4,000 hours a year. Several obligations in these years are not labour: telecom and SIM charges, cloud hosting, replacement hardware and spares, and third-party VAPT. Kindly clarify: a) whether these costs are to be quoted as a separate fixed annual line or included within the man-hour rate; and b) whether the 4,000 man-hours is a maximum or a committed annual quantity.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**SOW**	Annexure A, Annexure B and SOW 4.1.4	Well-wise details of the prioritised wells a) Annexure A is titled "Sensorization of 380 Wells", while its lift-type sections together cover 290 wells. Kindly provide the well-wise list of the 380 prioritised wells, indicating lift type, plinth, location and existing instrumentation, to enable accurate sizing of instruments, connectivity and field works. b) For the 69 upcoming artificial-lift wells in Annexure B, kindly indicate the expected handover dates, and confirm that plinths not ready for reasons attributable to OIL will be excluded from the Go-Live, SAT and liquidated damages timelines.	Well List and available information will be provided. Bidders are encouraged to visit site.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
7	**SCC**	SCC 5.0, 11.0 and 15.0	Background intellectual property Kindly confirm that: a) the inspection, handover and no-retention obligations apply to deliverables developed specifically for OIL under this contract; and b) the pre-existing platforms, COTS products and third-party licensed software of the bidder and its partners remain the background IP of their owners, and will be provided to OIL under a perpetual, non-exclusive license rather than by transfer of source code.	Confirmed

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SCC**	SCC Part B, SLA 4.0	Definition and measurement of accuracy Kindly specify, for each module (Virtual Flow Metering, IPSM, wax and hydrate prediction, well integrity, and each artificial-lift optimization): a) the accuracy metric, reference data and tolerance; b) the wells and period used for validation; c) when and how often accuracy will be measured; and d) whether the 5% or 10% deduction applies once or in each measurement period. Kindly also confirm that any shortfall in accuracy caused by the quality or availability of OIL-provided data or reference measurements will be excluded.	Tender specifications prevails.
9	**BEC**	Consortium	Is consortium allowed?	To be guided by tender terms.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-F

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**SOW**	4.1 The DOF shall use real-time IoT data, AI/ML and advanced analytics to optimize well performance, enable predictive maintenance, and improve hydrocarbon recovery.	Please confirm that bidders propose a combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	The bidder shall comply with Clauses 4.1 and 4.2. The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population. The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the physics-based reference model, well-performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				EDGE for autonomous artificial-lift optimization. The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities. This integrated approach shall ensure that well-level autonomous optimization does not result in sub-optimal field-level performance, thereby enabling coordinated and constraint-aware artificial-lift optimization across the 700-well population.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
2	**SOW**	BEC 2.1(A) Note (i); 4.1; 4.1.5; 4.2.9; SOR Items 7 and related TOR AI-based Digital Well Integrity Management is included in the qualification criteria, solution scope, technical requirements and BOQ.	Bidder believes AI-based Digital Well Integrity Management (DWIM) should be treated as a specialized domain solution rather than a component of the Digital Oilfield (DoF) due to differences in objectives, data requirements, regulatory implications, and implementation complexity. The primary focus of DoF is real-time production optimization, surveillance, and operational efficiency, leveraging high-frequency operational data. In contrast, well integrity management is a risk, compliance, and asset assurance function, driven by low-frequency inspection data, event-based diagnostics, barrier validation frameworks, and regulatory reporting requirements. Integrating DWIM into DoF would introduce significant scope expansion and complexity, as it requires: - Dedicated workflows for barrier management, failure modes, and risk classification (API/ISO standards) - Integration of inspection logs,	The tender scope remains unchanged. AI-based Digital Well Integrity Management is an integral DOF module under Clauses 4.1.5 and 4.2.9 and BOQ Item 7.

Sl. No.	Section	Clause Reference	Query	OIL's Response
			intervention history, well schematics, and compliance records, which are typically outside the historian ecosystem - Advanced AI/ML models requiring curated long-term datasets rather than real-time streaming data From an architectural standpoint, DoF platforms are optimized for real-time decision support and closed-loop optimization, whereas DWIM systems function as long-cycle analytical and governance platforms. Combining the two would (1) Dilute the primary value proposition of DoF (production optimization and surveillance) (2) Introduce data ownership and validation challenges across integrity, HSE, and operations teams (3) Delay implementation timelines due to additional integration with non-operational systems (inspection databases, document systems) (4) Increase regulatory risk exposure, as integrity systems require stricter validation, auditability, and compliance traceability	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			Industry best practice is to maintain a loosely coupled architecture, where: DoF consumes integrity status indicators or constraints (e.g., max allowable pressure, tubing limits) DWIM operates as an independent system of record for well barrier health, failure prediction, and compliance Including AI-Based Digital Well Integrity Management within the DoF scope is not recommended, as it represents a different functional domain (asset integrity vs production optimization), requires distinct data ecosystems and governance models, and would increase project complexity without proportionate benefit to DoF objectives. A decoupled but interoperable approach ensures both systems deliver value effectively without compromising scope, timeline, or accountability. Thus Bidder requests to decouple AI based digital Integrity management from DoF scope.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**SOW**	4.1.1; Annexure-A To enable optimisation at well head level, VFD and dynamometer will be required at selected SRP wells.	Bidder undestands that, global/ overall production optimization will encompass all the 700 wells considered under this DoF scope. Thus, VFD and dynamometer will be required for all SRP wells and not selected once. Please confirm if bidder understanding is correct.	Global/Overall Optimization is a key deliverable of IPSM. VFD and dynamometer are required at selected SRP wells. Quantities shall be as per Annexure-A and the SOR.
4	**SOW**	4.1.1-4.1.3; 4.2.1.1-4.2.1.7; Note 2 under 4.2.26 All the data from the well heads (existing & upcoming sensors as provided in Annexure-A) will be transmitted to OIL's OT Datalake (on-prem private cloud) via wireless connectivity through wireless gateways.	Please confirm if OT datalake is On-Prem or on cloud and it's physical location, type OSI PI etc? If on-prem datalake is available; PDMS solution can reside on same server as that of central datalake and cloud based dashboard can be made available for users. Please confirm the approach.	The OT Data Lake is on-prem and will be provided by OIL. The bidder shall propose the DOF infrastructure and architecture in compliance with Clauses 4.2.1.1 to 4.2.1.5. Please refer the architecture mentioned in the tender. Revised Annexure A will be published.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**SOW**	4.1.2; 4.2.3-4.2.3.3 The PDMS software will source existing real time data from the L2 historian at FHQ and enable data consolidation from various teams – surface, sub surface, chemical, reservoir, reserves etc. via automate or manual inputs.	PDMS system shall be designed considering necessary real time operational data. Cross-functional inputs (surface, subsurface, chemical, reservoir, reserves, etc.) are non-real-time and contextual in nature, and do not require dedicated integration pipelines at the DoF level. Forcing additional system integrations would increase project complexity, introduce data ownership ambiguities, and delay value realization. Existing cross-functional systems should continue to act as systems of record, while PDMS serves as the analytics, surveillance, and decision-support layer. Thus to avoid duplication of data pipelines, maintain clear data ownership and governance, reduce the integration risk and project complexity in alignment with standard DoF architecture best practices; bidder requests removal of additional cross-functional data incorporation from DoF scope. Bidder requests to re-phrase the text to "The PDMS software will	As per the tender clause

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			source existing real time data from the L2 historian at FHQ and other sources as necessary."	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**SOW**	4.1.3.4; 4.1.4.2.3; 4.1.4.3.2-4.1.4.3.4; 4.2.1.1; 4.2.1.6; 4.2.6; 4.2.7 Implementation of fail-safe shut down logic for gas lift wells.	Please elaborate on this requirement. Bidder understands that fail-safe shut-down logic, ESD logic is already in place for existing operational wells. Fail-safe shut-down logic, ESD logic for upcoming new wells shall be provided by the client. Design, configuration of these logics, well design is not considered in bidder's scope. Please confirm.	The bidder shall implement fail-safe shutdown logic for gas-lift wells. Autonomous and safety-critical control shall execute locally within OIL's OT Zone at L3 or below

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Sl. No.	Section	Clause Reference	Query	OIL's Response
7	**SOW**	4.1.4; 4.2.1.1; 4.2.7 The solution shall allow users to modify and update various input parameters such as gas lift injection rates, wellhead pressures, temperatures, flow regimes, pump performance parameters, reservoir parameters (PI, GOR, Water cut, etc.) as per field conditions and allow to run multiple optimization scenarios for improved field recovery and production from the field.	Only independent parameters can be modified in the simulation models. Override functionality can be provided to platform admins/ approvers.	Users shall be able to modify input parameters and run optimization scenarios as specified in Clause 4.1.4, subject to approved roles and operating safeguards.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SOW**	4.1.4.1; 4.2.5; 4.2.13.10-4.2.13.11; Annexure-A The solution implemented shall monitor and control existing Rod Lift wells that are not monitored and controlled remotely.	What about the wells that already have monitoring, control and optimization functionality. Please elaborate on integration requirements if any. Please provide details (vendor, current configuration, as-is status, etc) about the wells that already has monitoring and control solution available. Tender document also specifies that, SRP wells should be controlled, optimized locally. In that scenario please clarify the requirement of remote control.	All SRP/Rod Lift wells to be automated with load cell, Dynamometer & EDGE devices and shall be integrated with the DOF platform. Local autonomous control and remote monitoring/decision support shall comply with Clauses 4.2.1.1 and 4.2.5. Bidder is advised to visit sites for exact assessment

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Sl. No.	Section	Clause Reference	Query	OIL's Response
9	**SOW**	4.1.4.2; 4.2.1.1; 4.2.6 The solution shall integrate plunger lift optimization into a broader artificial lift control framework, enabling coordinated operation with lift-gas systems and shared surface infrastructure where applicable.	Please elaborate on broader integration requirements with global optimization, if the solution provided for each well is local optimizer. Please clarify the required coordination boundary between individual-well control and field/network-level optimization, including shared facility constraints, decision frequency, control hierarchy, and the approved mechanism for implementing optimum set points obtained via global optimization.	Coordination shall cover shared lift-gas and surface-infrastructure constraints. Optimization may be centralized, while control execution shall remain at L3 or below

ANNEXURE-1

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Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**SOW**	4.1.4.2.4-4.1.4.2.7; 4.2.1.1; 4.2.6 Closed-loop local plunger control, progressive automation and remote monitoring/operations requirements. The solution shall implement closed-loop plunger lift control, where cycle execution is governed by real-time measurements, energy-based lift qualification, and adaptive decision logic rather than fixed schedules or static rules. - 4.2.1.1 Control Commands	Please confirm the intended control hierarchy and precedence between local adaptive cycle control and centralized global optimization. Individual well by well optimization will provide local optima for that particular well which may not be truly achievable on the field and will defeat the purpose of optimization. Global optimization based on operating profitability represents the true optimum for a production network because wells do not operate independently. In a field comprising naturally flowing wells, Continuous Gas Lift (CGL), Intermittent Gas Lift (IGL), Plunger Assisted Gas Lift (PAGL), Sucker Rod Pumps (SRP), and ESP wells, all wells compete for common resources and are coupled through surface network constraints such as separator capacity, liquid handling limits, gas compression capacity, power availability, water disposal capacity, and flowline	The proposed approach shall comply with the tender hierarchy: L4/L5 provides advisory recommendations only, while autonomous control executes locally at L3 or below. Field-wide constraints shall be considered as specified. Well-by-well optimization in isolation may identify a local optimum for an individual well in an integrated production system, wells are interdependent and compete for common resources and surface facilities. Accordingly, for a field comprising naturally flowing, CGL, IGL, PAGL, SRP and ESP wells, the DOF solution shall recognize the interaction among wells and constraints such as separator capacity, liquid-handling capacity, gas compression/lift-gas availability, electrical power, water handling/disposal capacity, flowline/network pressure and other facility constraints. The intended optimization hierarchy is envisaged as follows: 1. Centralized Global Optimization: The centralized optimizer shall determine the field-wide optimum operating strategy and resource allocation based on the overall production-system objective, preferably

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			backpressure. A well-by-well optimization approach identifies the local optimum for each individual well. However, simultaneous operation of all wells at their respective local optima rarely results in the maximum economic value for the overall asset. Global optimization evaluates the entire production system and allocates constrained resources to maximize total field operating profitability, considering revenue from incremental hydrocarbon production and the associated operating costs, including lift gas consumption, power consumption, water handling, equipment degradation, and operational risks. Consequently, global optimization identifies the resource allocation and operating strategy that delivers the highest overall economic return rather than merely maximizing production from individual wells. This approach yields the true field-wide optimum and frequently produces higher net asset value than independent well-level	incorporating operating profitability/economic value rather than simply maximizing individual well production. 2. EDGE-Based Autonomous/Local Optimization: The EDGE device shall provide autonomous/adaptive optimization at the well or local asset level, using real-time measurements, well behaviour and operating constraints to continuously adjust the applicable lift/control parameters. The EDGE-based optimizer shall operate within the operating targets, constraints and resource allocation established by the global optimizer. 3. Coordination Between Global and EDGE Optimization: Where the locally determined optimum differs from the field-wide optimum, the global optimization objective and resource allocation shall take precedence, while the EDGE device shall optimize the individual well's operation within the permissible operating envelope assigned to it.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			optimization. Please confirm bidder understanding and approach is acceptable.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
11	**SOW**	4.1.4.3.3-4.1.4.3.4; 4.2.3.1; 4.2.10-4.2.11; Note 3 under 4.2.26; SLA 1-4 The solution shall provide autonomous model calibration	Automatic simulation model calibration is not accepted, as it would defeat the purpose of operational anomaly detection by continuously forcing the model outputs to match the current plant behavior, including any abnormal conditions. Calibration is a discrete, offline activity that should only be performed when model drift has been identified, investigated, and confirmed. Maintaining a calibrated but independent model is essential to ensure meaningful comparison between expected and actual performance, thereby enabling reliable detection of process deviations and operational anomalies. Please confirm bidder understanding and approach is acceptable.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**SOW**	4.1.4.3.4	This section is primarily automation requirements-activities that are generally performed from field or regional control room. Please confirm if these functionalities are required in DoF platform which is located centrally away from the actual field?	Yes. The specified monitoring, optimization and automation functions are required. Safety-critical and autonomous control shall execute only within the approved OT environment at L3 or below.
13	**SOW**	Name	Please confirm that bidder propose a combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**SOW**	4.1.7.1 The solution shall enable dynamic multiphase simulations with full operational constraints, sensitivities, and what-if scenario analysis.	Bidder requests to re-phrase the text to "The solution shall include first-principles base multiphase simulations with capability to include operational constraints to perform sensitivities, and what-if scenario analysis."	OIL will review and revert
15	**SOW**	4.1.7.3 Provide clear visualization of asphaltene precipitation risks supporting preventive operations and informed decision-making.	Please confirm the requirement of Asphaltene modelling	Asphaltene-risk visualization is required under Clause 4.1.7.3. The necessary requirements for visualizing asphaltene precipitation risks shall be discussed and finalized during the detailed engineering stage.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
16	**SOW**	4.2.1.7(A); 4.2.3; 10.0; SOR Item 14 The platform shall support 180 concurrent authenticated users, while BOQ Item 14 specifies 150 web-application users.	Please confirm the concurrent authenticated users required.	OIL will review and revert
17	**SOW**	4.2.7.1 AI/ML optimization with retrainable models supporting what-if analysis for gas-injection scenarios.	Please confirm that gas-lift optimization may be delivered using physics-based, data-driven or hybrid methods, provided the proposed solution meets the functional, performance, explainability and validation requirements.	Gas-lift optimization shall be implemented as an EDGE-enabled autonomous optimization capability, employing the specified hybrid optimization approach combining physics-based models with AI/ML-driven data analytics. The solution shall satisfy all specified functional, performance, explainability, validation, operational safety and reliability requirements, and shall demonstrate that optimization recommendations/actions are technically valid, operationally feasible, and consistent with the defined well and field operating constraints. under Clauses 4.1.4.3 and 4.2.7.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**SOW**	4.2.8; SLA 3-5; Payment Milestones 3-6 ESP KPI/acceptance targets and general tool accuracy/penalty provisions. • KPIs & acceptance: o Reduction in PI excursions outside band ≥30%. o Energy intensity improvement ≥5% (kWh/bbl.) without loss of liquid rate. o Accurate early-warning for gas lock events with precision ≥80% / recall ≥80% on validated events.	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if	The KPI and acceptance targets under Clause 4.2.8 remain applicable. Validation shall use OIL-approved datasets and scenarios, subject to the SLA exclusions.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			understanding is correct and specified approach is acceptable.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
19	**SOW**	4.2.10; SLA 3-5; Payment Milestones 3-6 VFM MAPE targets, tool-accuracy SLA and related acceptance provisions. • Accuracy targets (acceptance): o Oil & water rate MAPE ≤10–15% on validation wells; gas rate MAPE ≤15–20% (targets adjustable per well class).	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if	The VFM accuracy targets under Clause 4.2.10 remain applicable. Validation, recalibration and drift management shall use available well-test/reference data and approved procedures.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			understanding is correct and specified approach is acceptable.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
20	**SOW**	4.2.10; Note 3 under 4.2.26 Automatic VFM refit/retraining when model drift exceeds threshold, with administrator approval and drift-management limits.	Please confirm that VFM drift may be managed through automated monitoring and notification followed by administrator-approved recalibration or retraining, validation and controlled deployment.	Confirmed. VFM drift shall be monitored automatically, with administrator-approved recalibration/retraining, validation, controlled deployment and retained change logs.
21	**SOW**	4.2.11; SOR Item 9 Multiphase Simulation Engine: Transient multiphase flow modelling in wellbore + surface network + flow assurance for Dynamic digital model of reservoir, wellbore, surface network, facilities reflecting real physics and operational constraints.	Please confirm that the IPSM requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling across reservoirs, wells, lift systems, networks and facilities, based on approved use cases and required functionality.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
22	**SOW**	4.2.11; SOR Item 9 Accurate handling of transient multiphase flow, thermodynamics & Wax and hydrate kinetic mechanisms, Pipeline roughness and scale buildup effects.	Please confirm that the requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling, based on approved use cases, required functionality and data availability.	It cannot be considered fit-for-purpose and shall be provided strictly in accordance with the requirements specified in the tender clause.
23	**SOW**	4.2.12; AMC Item 34; SOR Items 10-12 The bidder shall do the integration with Command & Control Center (CCC) for showcasing the dashboards including all the wells parameters.	Please elaborate the integration requirements. Please provide the CCC architecture, hosting location, approved interfaces, cybersecurity requirements, data refresh rates, tag/KPI list, dashboard standards, user roles and responsibility split for design, licensing, deployment, testing and ongoing support.	CCC integration and dashboards are in bidder's scope. Detailed interfaces and API specifications will be provided during detailed engineering under the CCC scope

ANNEXURE-1

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Sl. No.	Section	Clause Reference	Query	OIL's Response
24	**SOW**	4.1; 4.2.12 Note; SOR Items 7-10; Payment Note for Migration 4.1 Additionally, the software solution shall impose no limitations on onboarding any future wells, and such additions must be accommodated without any extra cost to OIL. 4.2.12 Note: The bidder must ensure that the solution remains fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications beyond the contracted value.	Please define the maximum number of additional wells to be onboarded during the contract, together with the required modules, instrumentation, integrations. Please confirm that additions beyond the stated baseline will be managed through the contract change-control mechanism. Maximum number of well addition to be capped to +/- 2%. Any well that is shut-in, suspended, or otherwise non-producing during the implementation or contract period shall not be considered replaced by a newly added well. All newly commissioned wells shall be counted as additional wells for scalability purposes. The quoted scope is based on the contracted well count with an allowable variation of ±2%. Any increase beyond this threshold shall be managed through a mutually agreed change order/work order mechanism and compensated separately.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
25	**SOW**	Forwarding Letter item (o); 9.0-9.3; SCC A.4; SLA 3.0; Payment Milestones Software Implementation/Maintenance Timeline	Given the complexity and scale of the proposed Digital Oilfield / optimization program, we request clarification on the feasibility of the stipulated 11-month project timeline. Based on industry experience, key activities such as data consolidation and conditioning from multiple systems (e.g., historian, SCADA), development and calibration of physics-based/hybrid models, integration with existing IT/OT infrastructure, and deployment of analytics and optimization layers typically require iterative execution and validation. Additionally, dependencies related to data quality, system interfaces, cybersecurity approvals, and site acceptance testing introduce inherent schedule uncertainties. Compressing these interdependent activities into an 11-month period poses significant risks to solution robustness, model accuracy, and overall delivery quality. Industry best practices indicate that end-to-end implementation typically spans 24–36 months to	OIL will review and revert on the Implementation timelines

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			ensure sustainable performance and measurable outcomes. In view of the above, we request the Client to consider revising the overall project duration to 36 months, to enable effective deployment, integration, and long-term value realization.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**SOW**	4.2.1.7(A) and (C); 10.0; SOR Items 9 and 14; Payment Milestones The platform shall support 180 concurrent authenticated users and at least five concurrent user-initiated simulation/what-if runs.	Please clarify whether the requirement for five concurrent simulation/what-if runs is an aggregate platform limit or a per-user entitlement. Please confirm the required number of named and concurrent simulation users, user locations, modules to be accessed and licensing basis. The supply of software requires signing of Software License Agreement as per attached draft	The requirement is an aggregate platform capability of at least five concurrent OIL-approved user-initiated simulation/what-if runs. User access shall follow the approved access model

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Sl. No.	Section	Clause Reference	Query	OIL's Response
27	**SOW**	4.2.10 Configurable execution frequency (1-min / 5-min / hourly / daily)	The VFM execution frequency shall be finalized mutually during the implementation phase based on field data quality, measurement update rates, communication infrastructure, and operational requirements. 1-minute or 5-minute execution interval is generally not recommended as measurement noise, data latency, instrument uncertainty, and process stabilization requirements may adversely affect the reliability and robustness of flow estimates. The optimal calculation frequency will therefore be established jointly during detailed design to ensure an appropriate balance between responsiveness and prediction accuracy. Please confirm bidder understanding and approach is acceptable.	Confirmed.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
28	**SOW**	5.0-2 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.	Please confirm the pricing that will be considered for bid evaluation.	The quantities stipulated in the BOQ/Price Bid format shall be considered for Bid Evaluation.
29	**SOW**	5.0-3 During Hypercare, bidder to provide application managed services by the implementation team.	Please define hypercare period timeline.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
30	**SOW**	4 SLA LINKED TO TOOL ACCURACY	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e. historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution (i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if	The tool-accuracy SLA and tiered penalties under SCC Clause B.4.0 remain applicable. Approved dependencies may be considered only in accordance with the SLA exclusions

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			understanding is correct and specified approach is acceptable.	

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-G

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	Scope of Work	4.1 The DOF shall use real-time IoT data, AI/ML and advanced analytics to optimize well performance, enable predictive maintenance, and improve hydrocarbon recovery.	Please confirm that bidders may propose a fit-for-purpose combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population. The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the physics-based reference model, well-performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by EDGE for autonomous artificial-lift optimization. The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives,

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				including interactions among wells, gathering networks, compression systems, and surface facilities. This integrated approach shall ensure that well-level autonomous optimization does not result in sub-optimal field-level performance, thereby enabling coordinated and constraint-aware artificial-lift optimization across the 700-well population.
2	Scope of Work	BEC 2.1(A) Note (i); 4.1; 4.1.5; 4.2.9; SOR Items 7 and related TOR AI-based Digital Well Integrity Management is included in the qualification criteria, solution scope, technical requirements and BOQ.	Bidder believes AI-based Digital Well Integrity Management (DWIM) should be treated as a specialized domain solution rather than a component of the Digital Oilfield (DoF) due to differences in objectives, data requirements, regulatory implications, and implementation complexity. The primary focus of DoF is real-time production optimization, surveillance, and operational efficiency, leveraging high-frequency operational data. In contrast, well integrity management is a risk, compliance, and asset assurance	The tender scope remains unchanged. AI-based Digital Well Integrity Management is an integral DOF module under Clauses 4.1.5 and 4.2.9 and BOQ Item 7

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			function, driven by low-frequency inspection data, event-based diagnostics, barrier validation frameworks, and regulatory reporting requirements. Integrating DWIM into DoF would introduce significant scope expansion and complexity, as it requires: - Dedicated workflows for barrier management, failure modes, and risk classification (API/ISO standards) - Integration of inspection logs, intervention history, well schematics, and compliance records, which are typically outside the historian ecosystem - Advanced AI/ML models requiring curated long-term datasets rather than real-time streaming data From an architectural standpoint, DoF platforms are optimized for real-time decision support and closed-loop optimization, whereas DWIM systems function as long-cycle analytical and governance platforms. Combining the two would (1) Dilute the primary value proposition of DoF (production optimization and surveillance) (2) Introduce data ownership and validation challenges across integrity, HSE, and	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			operations teams (3) Delay implementation timelines due to additional integration with non-operational systems (inspection databases, document systems) (4) Increase regulatory risk exposure, as integrity systems require stricter validation, auditability, and compliance traceability Industry best practice is to maintain a loosely coupled architecture, where: DoF consumes integrity status indicators or constraints (e.g., max allowable pressure, tubing limits) DWIM operates as an independent system of record for well barrier health, failure prediction, and compliance Including AI-Based Digital Well Integrity Management within the DoF scope is not recommended, as it represents a different functional domain (asset integrity vs production optimization), requires distinct data ecosystems and governance models, and would increase project complexity without proportionate benefit to DoF objectives. A decoupled but interoperable approach ensures both systems deliver value effectively without compromising scope,	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			timeline, or accountability. Thus Bidder requests to decouple AI based digital Integrity management from DoF scope.	
3	Scope of Work	4.1.1; Annexure-A To enable optimisation at well head level, VFD and dynamometer will be required at selected SRP wells.	Bidder undestands that, global/ overall production optimization will encompass all the 700 wells considered under this DoF scope. Thus, VFD and dynamometer will be required for all SRP wells and not selected once. Please confirm if bidder understanding is correct.	Not confirmed. Clause 4.1.1 requires VFD and dynamometer at selected SRP wells. Quantities shall be as per Annexure-A and the SOR.Global/Overall Optimization is a key deliverable of IPSM
4	Scope of Work	4.1.1-4.1.3; 4.2.1.1-4.2.1.7; Note 2 under 4.2.26 All the data from the well heads (existing & upcoming sensors as provided in Annexure-A) will be transmitted to OIL's OT Datalake (on-prem private cloud) via wireless connectivity through wireless gateways.	Please confirm if OT datalake is On-Prem or on cloud and it's physical location, type OSI PI etc? If on-prem datalake is available; PDMS solution can reside on same server as that of central datalake and cloud based dashboard can be made available for users. Please confirm the approach.	The OT Data Lake is on-prem and will be provided by OIL. The DOF deployment shall comply with the architecture, interfaces and hosting requirements under Clauses 4.2.1.1 to 4.2.1.5
5	Scope of Work	4.1.2; 4.2.3-4.2.3.3 The PDMS software will source existing real time data from the L2 historian at FHQ and enable data consolidation from various teams – surface, sub surface, chemical, reservoir, reserves etc. via automate or manual inputs.	PDMS syetem shall be designed considering necessary real time operational data. Cross-functional inputs (surface, subsurface, chemical, reservoir, reserves, etc.) are non- real-time and contextual in nature, and do not require dedicated integration pipelines at the DoF level. Forcing additional system	The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			integrations would increase project complexity, introduce data ownership ambiguities, and delay value realization. Existing cross-functional systems should continue to act as systems of record, while PDMS serves as the analytics, surveillance, and decision-support layer. Thus to avoid duplication of data pipelines, maintain clear data ownership and governance, reduce the integration risk and project complexity in alignment with standard DoF architechture best practices; bidder requests removal of additional cross-functional data incorporation from DoF scope. Bidder requests to re-phrase the text to "The PDMS software will source existing real time data from the L2 historian at FHQ and other sources as necessary."	determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities.
6	Scope of Work	4.1.3.4; 4.1.4.2.3; 4.1.4.3.2-4.1.4.3.4; 4.2.1.1; 4.2.1.6; 4.2.6; 4.2.7 Implementation of fail-safe shut down logic for gas lift wells.	Please elaborate on this requirement. Bidder understands that fail-safe shut-down logic, ESD logic is already in place for existing operational wells. Fail-safe shut-down logic, ESD logic for upcoming new wells shall be provided by the client. Design, configuration of these	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			logics, well design is not considered in bidder's scope. Please confirm.	
7	Scope of Work	4.1.4; 4.2.1.1; 4.2.7 The solution shall allow users to modify and update various input parameters such as gas lift injection rates, wellhead pressures, temperatures, flow regimes, pump performance parameters, reservoir parameters (PI, GOR, Water cut, etc.) as per field conditions and allow to run multiple optimization scenarios for improved field recovery and production from the field.	Only independent parameters can be modified in the simulation models. Override functionality can be provided to platform admins/ approvers.	Users shall be able to modify the input parameters and run optimization scenarios as stipulated in Clause 4.1.4, subject to approved roles, workflows and operational safeguards.
8	Scope of Work	4.1.4.1; 4.2.5; 4.2.13.10-4.2.13.11; Annexure-A The solution implemented shall monitor and control existing Rod Lift wells that are not monitored and controlled remotely.	What about the wells that already have monitoring, control and optimization functionality. Please elaborate on integration requirements if any. Please provide details (vendor, current configuration, as-is status, etc) about the wells that already has monitoring and control solution available. Tender document also specifies that, SRP wells should be controlled, optimized locally. In that scenario please clarify the requirement of remote control.	All SRP/Rod Lift wells to be automated with load cell, Dynamometer & EDGE devices and shall be integrated with the DOF platform. Local autonomous control and remote monitoring/decision support shall comply with Clauses 4.2.1.1 and 4.2.5. Bidder is advised to visit sites for exact assessment
9	Scope of Work	4.1.4.2; 4.2.1.1; 4.2.6	Please elaborate on broder integration requirements with global	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		The solution shall integrate plunger lift optimization into a broader artificial lift control framework, enabling coordinated operation with lift-gas systems and shared surface infrastructure where applicable.	optimization, if the solution provided for each well is local optimizer. Please clarify the required coordination boundary between individual-well control and field/network-level optimization, including shared facility constraints, decision frequency, control hierarchy, and the approved mechanism for implementing optimum set points obtained via global optimization.	
10	Scope of Work	4.1.4.2.4-4.1.4.2.7; 4.2.1.1; 4.2.6 Closed-loop local plunger control, progressive automation and remote monitoring/operations requirements. The solution shall implement closed-loop plunger lift control, where cycle execution is governed by real-time measurements, energy-based lift qualification, and adaptive decision logic rather than fixed schedules or static rules. - 4.2.1.1 Control Commands	Please confirm the intended control hierarchy and precedence between local adaptive cycle control and centralized global optimization. Individual well by wll optimization will provide local optima for that perticular well which may not be truely achievable on the field and will defeat the purpose of optimization. Global optimization based on operating profitability represents the true optimum for a production network because wells do not operate independently. In a field comprising naturally flowing wells, Continuous Gas Lift (CGL), Intermittent Gas Lift (IGL), Plunger Assisted Gas Lift (PAGL), Sucker Rod Pumps (SRP), and ESP wells, all	The proposed approach shall comply with the tender hierarchy: cloud/L4-L5 provides advisory recommendations only, while autonomous control executes locally at L3 or below. Field-wide constraints shall be considered where specified. Well-by-well optimization in isolation may identify a local optimum for an individual well in an integrated production system, wells are interdependent and compete for common resources and surface facilities. Accordingly, for a field comprising naturally flowing,

Sl. No.	Section	Clause Reference	Query	OIL's Response
			wells compete for common resources and are coupled through surface network constraints such as separator capacity, liquid handling limits, gas compression capacity, power availability, water disposal capacity, and flowline backpressure. A well-by-well optimization approach identifies the local optimum for each individual well. However, simultaneous operation of all wells at their respective local optima rarely results in the maximum economic value for the overall asset. Global optimization evaluates the entire production system and allocates constrained resources to maximize total field operating profitability, considering revenue from incremental hydrocarbon production and the associated operating costs, including lift gas consumption, power consumption, water handling, equipment degradation, and operational risks. Consequently, global optimization identifies the resource allocation and operating strategy that delivers the highest overall economic return rather than merely maximizing production from individual wells.	CGL, IGL, PAGL, SRP and ESP wells, the DOF solution shall recognize the interaction among wells and constraints such as separator capacity, liquid-handling capacity, gas compression/lift-gas availability, electrical power, water handling/disposal capacity, flowline/network pressure and other facility constraints. The intended optimization hierarchy is envisaged as follows: 1. Centralized Global Optimization: The centralized optimizer shall determine the field-wide optimum operating strategy and resource allocation based on the overall production-system objective, preferably incorporating operating profitability/economic value rather than simply maximizing individual well production. 2. EDGE-Based Autonomous/Local Optimization: The EDGE device shall provide

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			This approach yields the true field-wide optimum and frequently produces higher net asset value than independent well-level optimization. PLease confirm bidder understanding and approach is acceptable.	autonomous/adaptive optimization at the well or local asset level, using real-time measurements, well behaviour and operating constraints to continuously adjust the applicable lift/control parameters. The EDGE-based optimizer shall operate within the operating targets, constraints and resource allocation established by the global optimizer. 3. Coordination Between Global and EDGE Optimization: Where the locally determined optimum differs from the field-wide optimum, the global optimization objective and resource allocation shall take precedence, while the EDGE device shall optimize the individual well's operation within the permissible operating envelope assigned to it. The global optimization should consider, as applicable, incremental hydrocarbon

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				revenue and associated operating costs, including lift-gas consumption, power consumption, water handling, equipment degradation/operational constraints and other relevant economic penalties, to determine the optimum operating strategy for the integrated production system.
11	Scope of Work	4.1.4.3.3-4.1.4.3.4; 4.2.3.1; 4.2.10-4.2.11; Note 3 under 4.2.26; SLA 1-4 The solution shall provide autonomous model calibration	Automatic simulation model calibration is not accepted, as it would defeat the purpose of operational anomaly detection by continuously forcing the model outputs to match the current plant behavior, including any abnormal conditions. Calibration is a discrete, offline activity that should only be performed when model drift has been identified, investigated, and confirmed. Maintaining a calibrated but independent model is essential to ensure meaningful comparison between expected and actual performance, thereby enabling reliable detection of process deviations and operational anomalies. Please confirm bidder	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			understanding and approach is acceptable.	
12	Scope of Work	4.1.4.3.4	This section is primarily automation requirements- activities that are generally performed from field or regional control room. Please confirm if these funtionalities are required in DoF platform which is located centrally away from the actual field?	Oil will review and revert
13	Scope of Work	4.1.7; 4.2.11; SOR Items 9 and 41 Develop a physics-based transient or dynamic model, multiphase digital model of wells, surface networks and gas lift network modelling, reservoirs, lift systems, and production facilities, capturing true operating conditions across the field.	Please confirm that bidders may propose a fit-for-purpose combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	Oil will review and revert
14	Scope of Work	4.1.7.1 The solution shall enable dynamic multiphase simulations with full operational constraints, sensitivities, and what-if scenario analysis.	Bidder requests to re-phrase the text to "The solution shall include first-principles base multiphase simulations with capability to include operational constraints to perform sensitivities, and what-if scenario analysis."	The tender clause remains unchanged.
15	Scope of Work	4.1.7.3 Provide clear visualization of asphaltene precipitation risks	Please confirm the requirement of Asphaltene modelling	Asphaltene-risk visualization is required under Clause 4.1.7.3.The necessary requirements for visualizing asphaltene precipitation risks

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		supporting preventive operations and informed decision-making.		shall be discussed and finalized during the detailed engineering stage.
16	Scope of Work	4.2.1.7(A); 4.2.3; 10.0; SOR Item 14 The platform shall support 180 concurrent authenticated users, while BOQ Item 14 specifies 150 web-application users.	Please confirm the concurrent authenticated users required.	OIL will review and revert
17	Scope of Work	4.2.7.1 AI/ML optimization with retrainable models supporting what-if analysis for gas-injection scenarios.	Please confirm that gas-lift optimization may be delivered using physics-based, data-driven or hybrid methods, provided the proposed solution meets the functional, performance, explainability and validation requirements.	Gas-lift optimization shall be implemented as an EDGE-enabled autonomous optimization capability, employing the specified hybrid optimization approach combining physics-based models with AI/ML-driven data analytics. The solution shall satisfy all specified functional, performance, explainability, validation, operational safety and reliability requirements, and shall demonstrate that optimization recommendations/actions are technically valid, operationally feasible, and consistent with the defined well and field operating constraints. under Clauses 4.1.4.3 and 4.2.7.

ANNEXURE-1

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	Scope of Work	4.2.8; SLA 3-5; Payment Milestones 3-6 ESP KPI/acceptance targets and general tool accuracy/penalty provisions. • KPIs & acceptance: o Reduction in PI excursions outside band ≥30%. o Energy intensity improvement ≥5% (kWh/bbl.) without loss of liquid rate. o Accurate early-warning for gas lock events with precision ≥80% / recall ≥80% on validated events.	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	OIL will review and revert
19	Scope of Work	4.2.10; SLA 3-5; Payment Milestones 3-6	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured	The VFM accuracy targets in Clause 4.2.10 remain applicable. Validation,

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		VFM MAPE targets, tool-accuracy SLA and related acceptance provisions. • Accuracy targets (acceptance): o Oil & water rate MAPE ≤10–15% on validation wells; gas rate MAPE ≤15–20% (targets adjustable per well class).	parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	recalibration and drift management shall use available well-test/reference data and approved procedures.
20	Scope of Work	4.2.10; Note 3 under 4.2.26 Automatic VFM refit/retraining when model drift exceeds threshold, with administrator approval and drift-management limits.	Please confirm that VFM drift may be managed through automated monitoring and notification followed by administrator-approved recalibration or retraining,	Confirmed. VFM drift shall be monitored automatically, with administrator-approved recalibration/retraining, validation, controlled

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			validation and controlled deployment.	deployment and retained change logs,
21	Scope of Work	4.2.11; SOR Item 9 Multiphase Simulation Engine: Transient multiphase flow modelling in wellbore + surface network + flow assurance for Dynamic digital model of reservoir, wellbore, surface network, facilities reflecting real physics and operational constraints.	Please confirm that the IPSM requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling across reservoirs, wells, lift systems, networks and facilities, based on approved use cases and required functionality.	OIL will review and revert
22	Scope of Work	4.2.11; SOR Item 9 Accurate handling of transient multiphase flow, thermodynamics & Wax and hydrate kinetic mechanisms, Pipeline roughness and scale buildup effects.	Please confirm that the requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling, based on approved use cases, required functionality and data availability.	OIL will review and revert
23	Scope of Work	4.2.12; AMC Item 34; SOR Items 10-12 The bidder shall do the integration with Command & Control Center (CCC) for showcasing the dashboards including all the wells parameters.	Please elaborate the integration requirements. Please provide the CCC architecture, hosting location, approved interfaces, cybersecurity requirements, data refresh rates, tag/KPI list, dashboard standards, user roles and responsibility split for design, licensing, deployment, testing and ongoing support.	OIL will review and revert
24	Scope of Work	4.1; 4.2.12 Note; SOR Items 7-10; Payment Note for Migration 4.1 Additionally, the software solution	Please define the maximum number of additional wells to be onboarded during the contract, together with the required modules,	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		shall impose no limitations on onboarding any future wells, and such additions must be accommodated without any extra cost to OIL. 4.2.12 Note: The bidder must ensure that the solution remains fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications beyond the contracted value.	instrumentation, integrations. Please confirm that additions beyond the stated baseline will be managed through the contract change-control mechanism. Maximum number of well addition to be capped to +/- 2%. Any well that is shut-in, suspended, or otherwise non-producing during the implementation or contract period shall not be considered replaced by a newly added well. All newly commissioned wells shall be counted as additional wells for scalability purposes. The quoted scope is based on the contracted well count with an allowable variation of ±2%. Any increase beyond this threshold shall be managed through a mutually agreed change order/work order mechanism and compensated separately.	
25	Scope of Work	Forwarding Letter item (o); 9.0-9.3; SCC A.4; SLA 3.0; Payment Milestones Software Implementation/Maintenance Timeline	Given the complexity and scale of the proposed Digital Oilfield / optimization program, we request clarification on the feasibility of the stipulated 11-month project timeline. Based on industry experience, key activities such as data consolidation and conditioning from multiple systems (e.g., historian, SCADA), development and	OIL will review and revert on the Implementation timeline

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			calibration of physics-based/hybrid models, integration with existing IT/OT infrastructure, and deployment of analytics and optimization layers typically require iterative execution and validation. Additionally, dependencies related to data quality, system interfaces, cybersecurity approvals, and site acceptance testing introduce inherent schedule uncertainties. Compressing these interdependent activities into an 11-month period poses significant risks to solution robustness, model accuracy, and overall delivery quality. Industry best practices indicate that end-to-end implementation typically spans 36-48 months to ensure sustainable performance and measurable outcomes. In view of the above, we request the Client to consider revising the overall project duration to 48 months, to enable effective deployment, integration, and long-term value realization.	
26	Scope of Work	4.2.1.7(A) and (C); 10.0; SOR Items 9 and 14; Payment Milestones The platform shall support 180 concurrent authenticated users and	Please clarify whether the requirement for five concurrent simulation/what-if runs is an aggregate platform limit or a per-user entitlement. Please confirm the	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		at least five concurrent user-initiated simulation/what-if runs.	required number of named and concurrent simulation users, user locations, modules to be accessed and licensing basis.	
27	Scope of Work	4.2.10 Configurable execution frequency (1-min / 5-min / hourly / daily)	The VFM execution frequency shall be finalized mutually during the implementation phase based on field data quality, measurement update rates, communication infrastructure, and operational requirements. 1-minute or 5-minute execution interval is generally not recommended as measurement noise, data latency, instrument uncertainty, and process stabilization requirements may adversely affect the reliability and robustness of flow estimates. The optimal calculation frequency will therefore be established jointly during detailed design to ensure an appropriate balance between responsiveness and prediction accuracy. Please confirm bidder understanding and approach is acceptable.	Execution frequency shall be configurable at 1-minute, 5-minute, hourly and daily intervals as specified in Clause 4.2.10.
28	Scope of Work	5.0-2 Out of 5 years AMC, for period of 1st year, the bidder will share fixed AMC charges per quarter as defined in	Please confirm the pricing that will be considered for bid evaluation.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		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.		
29	Scope of Work	5.0-3 During Hypercare, bidder to provide application managed services by the implementation team.	Please define hypercare period timeline.	OIL will review and revert
30	Scope of Work	4 SLA LINKED TO TOOL ACCURACY	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live),	The tool-accuracy SLA and tiered penalties under SCC Clause B.4.0 remain applicable. Approved data dependencies may be considered only in accordance with the SLA exclusions

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	
31	Payment terms	PART-4 SECTION-IV C.PAYMENT TERMS & PAYMENT MILESTONES: b.Software & Hardware package for DOF solution Kick-off & Mobilization Period milestone	Request OIL to change as 'LD will be applicable on non-compliance (T1 = 60 days)	OIL will review and revert
32	Payment terms	PART-4 SECTION-IV C.PAYMENT TERMS & PAYMENT MILESTONES: b.Software & Hardware package for DOF solution	Request OIL to allow biider to submit Invoice based on progressive completion under each milestone. (For SL No.2,3 & 4 listed under b.Software & Hardware package for DOF solution)	OIL will review and revert
33	Liability	16 16.0 LIMITATION OF LIABILITY: 16.b: 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	Request OIL to consider Bidder request against below clause "provided however that this limitation shall not apply to the cost of repairing or replacing defective equipment by the CONTRACTOR" Bidder request: The maximum Limitation for reparing or replacing defective equipment by the CONTRACTOR shall not exceed	No change in GCC provision

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		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.	100% of the contract value. Request OIL to consider Bidder request against below clause "or to any obligation of the CONTRACTOR to indemnify the COMPANY with respect to Intellectual Property Rights." Bidder request : IP indemnity to the extent of using commercially reasonable efforts to procure any licenses or approvals to ensure continued use of the product is the only indemnification obligation, and this will the sole remedy for OIL with respect to IP indemnity.	
34	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation DOF is scoped for 700 wells; 380 wells prioritized for sensorization per Annexure-A, which lists tentative instrument quantities and explicitly states quantities 'may change' subject to a mandatory pre-price-bid site visit.	For the remaining ~320 wells (700 minus the 380 in Annexure-A), please confirm: (a) whether any instrumentation/BOQ scope applies to them within this contract, or whether they are software-onboarding-only (VFM/PDMS/dashboards) with no field hardware; and (b) the timeline/mechanism by which their BOQ (if any) will be finalized and priced.	OIL will review and revert
35	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Section 4.1.4.1.1 states SRP scope =	Please reconcile the SRP well count: confirm whether the '45 existing' in Section 4.1.4.1.1 refers only to Rajasthan wells, or whether it	The SRP optimization scope is 53 wells (45 existing =35 SRP from Rajasthan+ 10 from FHQ, Duliajan and 8

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		53 wells (45 existing + 8 upcoming). Annexure-B's field-wise breakdown shows existing SRP well plinths as Eastern-4 + Western-7 + Rajasthan-45 = 56 existing wells, not 45.	should include the Eastern (4) and Western (7) SRP wells as well, and provide a consolidated, location-wise list of all SRP wells in scope (existing + upcoming).	upcoming) as stated in Clause 4.1.4.1.1. Annexure-B states that the 35 Rajasthan plinths cover 45 SRP wells.
36	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Section 4.1.4.4.1 states ESP scope = 28 wells (8 existing + 20 upcoming). Annexure-B shows existing ESP well plinths as Eastern-3 + Western-2 = 5, not 8.	Please reconcile the ESP well count and provide a consolidated, location-wise list of all 8 existing ESP wells in scope (Annexure-B only accounts for 5).	The ESP optimization scope is 28 wells (8 existing and 20 upcoming) as stated in Clause 4.1.4.4.1
37	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Section 4.1.4.3.1 states gas-lift scope = 'all 48' gas lift wells (continuous + intermittent), matching Annexure-A's flowmeter/choke-valve quantity of 48. Annexure-B's field-wise breakdown shows only Eastern-12 + Western-15 = 27 existing gas-lift well plinths, with no Gas Lift line item at all under 'Upcoming AL Wells'.	Please provide the complete, location-wise list of all 48 gas-lift wells in scope, since Annexure-B's field breakdown accounts for only 27 of the 48 (a 21-well gap, with no visible 'Rajasthan' or 'upcoming' Gas Lift entry).	OIL will review and revert
38	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Section 4.1.4.2.1 states plunger-lift scope = 75 wells (34 existing + 41 upcoming). Annexure-B shows	Please reconcile the plunger-lift 'existing' well count (34 stated vs 28 derivable from Annexure-B) and confirm the location-wise list of all 75 wells in scope.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		existing PAGL well plinths as Eastern-14 + Western-14 = 28, not 34 (Annexure-A's autocatcher/valve quantity of 75 does match the stated total).		
39	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Section 4.2.1.3 states OIL has two existing wireless wellhead monitoring systems - Yokogawa (10 wells) and Kelton Technologies (77 wells), i.e. 87 wells - but later in the same clause refers to 'the existing well head data of 90 wells' requiring integration.	Please confirm the correct total well count (87 vs 90) for the existing wireless wellhead systems requiring integration/migration into the new OT data lake, and provide the consolidated well list with make/model of the field devices at each.	The integration scope is the existing wellhead data of 90 wells as stated in Clause 4.2.1.3. Make/model details of existing RTUs and modems will be provided during detailed engineering
40	Quantification - BOQ	Overall Scope & Well-Count / BOQ Reconciliation Annexure-A instrument quantities are explicitly stated as 'tentative and may change'; bidders 'will have to visit OIL sites before price bid to assess the availability of instruments in field'.	Please confirm: (a) the site-visit coordination process and point-of-contact for each field (Eastern Assam, Western Assam, Rajasthan) given the compressed timeline between the pre-bid conference (22-Sep-2026) and bid closing (6-Oct-2026); (b) whether OIL will issue a revised/firmed-up Annexure-A via corrigendum before bid closing, or whether bidders must independently adjust their priced BOQ based on their own site survey without a formal addendum.	Bidders are advised to visit OIL's sites before bid submission. Corrigendum to be published for exact quantity.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
41	Scope Clarification	Production Data Management System (PDMS) PDMS must consolidate data from OT data lake, SCADA, Historian, GRPC, RTPMA and enable manual inputs from surface, sub-surface, chemical, reservoir and reserves teams; bidder must also 'QC & upload of all historic data archived in the hard disk into the PDMS'.	Please quantify the volume and time-span of historic data to be migrated from hard-disk archives into PDMS (approximate record count / years of history / source format), and confirm whether GRPC and RTPMA interface specifications (APIs, data dictionaries) will be provided by OIL pre-award or need to be reverse-engineered by the bidder.	The bidder shall be responsible for identification, QC, digitization/structuring, validation and upload of all relevant historical data into PDMS, including data available in hard-disk archives, manual records, PDF, Excel, Word and other applicable formats. The tender does not prescribe a fixed volume, record count or time-span for historical data migration, as the actual quantity and condition of archived data may vary across the field and data sources. The bidder shall accordingly assess and accommodate the historical data volume and formats during detailed engineering/data assessment, including appropriate provisions for data cleansing, mapping, validation and migration. With respect to GRPC and RTPMA interfaces, the detailed interface specifications,

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				including APIs, data dictionaries, data structures, communication protocols and relevant existing interface details, shall be provided/made available by OIL during detailed engineering, as applicable.
42	Scope Clarification	Production Data Management System (PDMS) Suggested PDMS or equivalent system will map the following production related business process at minimum: 1. Mass & volumetric balance 2. Well Test & Validation 3. Event Management 4. Deferment Management 5. Well Production Allocation	Please confirm is there preferred PDMS platform or if OEM-neutral solutions are acceptable. Kindly brief the customization of business process expected by OIL.	OIL will review and revert
43	Scope Clarification	Artificial Lift - SRP Optimization Section 4.1.4.1.1 scopes 53 SRP wells, but Annexure-A lists VFD quantity = 28 and Dynamometer quantity = 36 for SRP wells - both fewer than the well count.	Please clarify which SRP wells receive full closed-loop retrofit (VFD + RPC + dynamometer) versus which receive monitoring-only instrumentation (PT/TT only, no VFD/dynamometer), since Annexure-A's VFD/dynamometer quantities are lower than the total SRP well count.	SRP VFD and dynamometer quantities shall be as per Annexure-A/SOR. Final well-wise allocation will be confirmed after field visit & during detailed engineering. All identified SRP wells within the DOF scope shall be provided with EDGE-enabled autonomous optimization capability. Accordingly, the SRP optimization architecture

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				shall support autonomous, closed-loop optimization at each well, based on available real-time operating and performance data. The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual well operating conditions. The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				necessary for implementation of autonomous SRP optimization across all identified wells.
44	Deliverable Clarification	Artificial Lift - SRP Optimization 'The solution shall support on-prem private cloud deployment using lightweight, event-driven architecture with MQTT protocol' alongside 'fully edge-contained autonomous control... inside the secure OT zone'.	Please confirm whether an on-prem private-cloud data centre / server room already exists at OIL's Duliajan FHQ (and Rajasthan PHQ) for hosting this on-prem private-cloud layer, or whether its supply (servers, storage, virtualization, DC infrastructure) is within the bidder's scope.	OIL will provide the required infra in OIL's Azure environment. Sizing details must be provided by the respective bidders. The bidders' responsibilities in this aspect will be shared in a corrigendum.
45	Scope Clarification	Artificial Lift - SRP Optimization Solution must 'monitor and control existing Rod Lift wells that are not monitored and controlled remotely' - 53 wells (45 existing + 8 upcoming).	Of the 53 wells, please confirm how many currently have ANY form of existing automation (e.g. timer controller, basic RPC without optimization) versus fully manual DOL- started units with zero automation - a mixed baseline changes the retrofit design and effort per well.	The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual well operating conditions. OIL

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				will provide relevant available data.
46	Acceptance Compliance	Artificial Lift - SRP Optimization Edge IoT Hardware should support minimum two rod lift analysis method for data analysis to generate downhole cards apart from RPC downhole card.'	Please confirm whether OIL mandates specific downhole-card analysis methods (e.g. Gibbs wave-equation, Everitt-Jennings, or a named proprietary method already in use at OIL) or whether the bidder may propose any two internationally recognized methods of its choice, provided accuracy is demonstrated.	Edge IOT shall support distinct downhole analysis like gibbs & modified everitt jennings calculation that takes surface raw card data from rod pumo controller and generate downhole cards.
47	Acceptance Compliance	Artificial Lift - SRP Optimization Solution must generate alarms for pumping-unit balance issues, rod tagging, gearbox overload, high rod stress, valve/tubing leaks, gas interference/locking, fluid pound, vibration issues, and pump issues (9 named conditions).	Please confirm whether all 9 listed anomaly conditions are mandatory pass/fail items for technical compliance, or an indicative (non-exhaustive) list, and how OIL intends to validate detection accuracy at SAT (e.g. against historically confirmed failure events, or synthetic/injected test conditions).	The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure necessary for implementation of autonomous SRP optimization across all identified wells.
48	Acceptance Compliance	Artificial Lift - SRP Optimization Solution must optimize SPM/VFD frequency to 'maintain optimal pump fillage' and 'optimize energy consumption by matching SPM to inflow capacity' - no numeric target given.	Please confirm whether OIL will define a quantitative target for SRP production uplift and/or energy-consumption reduction (analogous to ESP's explicit ≥5% kWh/bbl improvement target in Cl. 4.2.8), to be demonstrated during SAT or an agreed post-Go-Live measurement window.	This is mandatory. Solution must optimize SPM/VFD frequency to 'maintain optimal pump fillage' and 'optimize energy consumption by matching SPM to inflow capacity' - no numeric target given.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
49	Scope Clarification	Artificial Lift - Plunger Lift Optimization Solution must 'support plunger lift operation across a wide range of reservoir pressures, liquid loading conditions, completion types, and surface constraints' across conventional and gas-assisted plunger-lift wells.	Please provide the well-by-well split of conventional vs gas-assisted (lift-gas-assisted) plunger-lift wells within the 75-well scope, since gas-assisted wells require additional gas-injection instrumentation/coordination logic beyond a conventional plunger-lift retrofit.	This is mandatory. Solution must 'support plunger lift operation across a wide range of reservoir pressures, liquid loading conditions, completion types, and surface constraints' across conventional and gas-assisted plunger-lift wells. The list of conventional plunger lift & PAGL wells will be provided.
50	Scope Clarification	Artificial Lift - Plunger Lift Optimization The 75-well scope comprises 34 existing wells and 41 upcoming wells, 'with inherent provision for future instrumentation.'	Please confirm what 'inherent provision for future instrumentation' concretely requires the bidder to supply now for the 41 upcoming wells - e.g. spare I/O/communication capacity sized into the shared edge/RTU platform, pre-configured software licenses, or simply a documented onboarding procedure to be executed if/when each well is drilled/completed - since this affects both day-one BOQ sizing and the commercial model for future well additions.	OIL will review and revert
51	Scope Clarification	Artificial Lift - Gas Lift Optimization / AGLO Solution must optimize both Continuous Gas Lift and Intermittent Gas Lift wells, with materially different control approaches (continuous	Please provide the well-by-well split of continuous vs intermittent gas-lift wells within the 48-well scope, and confirm the number/capacity of shared lift-gas compressors and compressor headers each well group is connected to.	OIL will provide the necessary data

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		choke- based control vs cyclic motorized-choke timing).		
52	Acceptance Compl	Artificial Lift - Gas Lift Optimization / AGLO The solution shall provide autonomous model calibration, continuously adapting well inflow performance, productivity indices, and operating envelopes without manual tuning.'	Please confirm the availability of existing well-test data, PVT/fluid data, and IPR (inflow performance relationship) curves for the 48 gas-lift wells to seed initial model calibration, and the expected minimum well-test frequency going forward that the autonomous calibration logic can rely on.	Under the IPSM deliverables, the bidder shall develop a physics-based well model and perform the necessary nodal analysis to establish the Gas Lift Performance Curve (GLPC) and Optimum Cycle Time (OCT) prior to deployment of the EDGE autonomous optimization system at the well level. The validated model outputs shall serve as the baseline/reference inputs for the EDGE autonomous optimization system. Following deployment, the optimization results, production rates and key well-performance parameters generated by EDGE shall be validated against field measurements obtained from MPFM, Test Separator, and SCADA-based well testing, with appropriate model calibration and reconciliation as required.

ANNEXURE-1

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Sl. No.	Section	Clause Reference	Query	OIL's Response
53	Solution Scope	Artificial Lift - Gas Lift Optimization / AGLO The solution shall perform real-time anomaly detection and predictive maintenance on lift gas compressors using sensor data, AI-enabled edge analytics, and trend analysis.'	Please confirm which lift-gas compressors are in scope for predictive maintenance (make/model/existing instrumentation level) and whether compressor sensor data is already available via existing SCADA/historian, or whether additional compressor instrumentation must be supplied by the bidder as part of this scope.	The tender does not identify the compressor make/model or existing instrumentation details. Under the IPSM deliverables, the bidder shall develop a physics-based well model and perform the necessary nodal analysis to establish the Gas Lift Performance Curve (GLPC) and Optimum Cycle Time (OCT) prior to deployment of the EDGE autonomous optimization system at the well level. The validated model outputs shall serve as the baseline/reference inputs for the EDGE autonomous optimization system. Following deployment, the optimization results, production rates and key well-performance parameters generated by EDGE shall be validated against field measurements obtained from MPFM, Test Separator, and SCADA-based well testing, with appropriate model

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				calibration and reconciliation as required.
54	Deliverable Clarification	Artificial Lift - ESP Optimization Solution must provide 'Prediction of failure risk or remaining useful life (RUL)' for ESP wells using ML models trained on historical and real-time data.	Please confirm the availability and format of historical ESP failure/workover records (failure mode, run-life, pull reason) for the 28 in-scope wells, and the minimum historical data duration OIL can provide - this is required to scope the RUL-model development and validation effort.	Prior to deployment of the EDGE-enabled autonomous optimization system, the bidder shall develop and validate a physics-based integrated well–ESP model for each identified ESP well under IPSM. The bidder shall perform the necessary nodal and ESP system analyses to establish the well operating envelope, IPR/VLP characteristics, ESP performance characteristics, optimum operating frequency/speed, allowable operating limits, and target production conditions. The model-derived operating parameters and constraints shall be incorporated into the EDGE platform to enable real-time, closed-loop autonomous optimization of ESP operation. The predicted production rates and optimization results shall be validated against measured field data obtained from

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				MPFM, Test Separator, SCADA and/or VFM, as applicable. The bidder shall demonstrate acceptable agreement between model-predicted and independently measured production rates before the model is commissioned for autonomous optimization. The validated model shall thereafter be continuously updated/calibrated using available real-time well, ESP and production measurement data.
55	Deliverable Clarification	Artificial Lift - ESP Optimization KPI & Acceptance: 1. Reduction in PI excursion outside band > 30% 2. Energy Intensity Improvement >5% KW/bbl without loss of liquid rate. 3. Accurately early warning of gas lock events with precision >80% on validated events.	W.r.t KPI & Acceptance criteria. Please share the basis optimization. Please confirm: (a) the baseline period/dataset against which the 30% PI-excursion reduction and 5% energy-intensity improvement will be measured (e.g. a pre-DOF 3- month baseline per well, to be agreed at commissioning); (b) the minimum number of 'validated events' required to statistically assess the 80%/80% gas-lock precision/recall KPI, given only 28 wells are in scope; and (c) whether these KPIs must be met at SAT (immediate) or over an agreed	Oil will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			post-Go-Live measurement/observation window.	
56	Acceptance Compliance	Artificial Lift - ESP Optimization ML models must detect 'abnormal current/power/torque signatures,' 'early gas lock,' 'flow instability,' 'sensor drift' and predict 'failure risk or remaining useful life (RUL).'	Please confirm the historical data duration/granularity (years of SCADA/VFD trend data, sampling interval) available for the 8 existing ESP wells to train the anomaly-detection and RUL-prediction models, since RUL models in particular typically require multiple observed failure cycles per well class to be statistically meaningful.	OIL will provide available data during detailed engineering phase.
57	Performance Expectation	Artificial Lift - ESP Optimization The system shall enable closed-loop autonomous optimization of ESP wells... to maximize production, maintain stable operation, and protect equipment.'	Please confirm the maximum permitted autonomous frequency-adjustment step size and adjustment rate-limit (e.g. max Hz change per adjustment, minimum time between adjustments) OIL expects for closed-loop ESP control, to ensure the proposed control-loop design aligns with OIL's risk tolerance for autonomous VFD frequency changes on producing wells.	Prior to deployment of the EDGE-enabled autonomous optimization system, the bidder shall develop and validate a physics-based integrated well–ESP model for each identified ESP well under IPSM. The bidder shall perform the necessary nodal and ESP system analyses to establish the well operating envelope, IPR/VLP characteristics, ESP performance characteristics, optimum operating frequency/speed, allowable operating limits, and target production conditions. The model-derived operating

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				parameters and constraints shall be incorporated into the EDGE platform to enable real-time, closed-loop autonomous optimization of ESP operation. The predicted production rates and optimization results shall be validated against measured field data obtained from MPFM, Test Separator, SCADA and/or VFM, as applicable. The bidder shall demonstrate acceptable agreement between model-predicted and independently measured production rates before the model is commissioned for autonomous optimization. The validated model shall thereafter be continuously updated/calibrated using available real-time well, ESP and production measurement data. Frequency adjustments shall operate within approved safe operating envelopes and control logic. Detailed limits shall be finalized during detailed engineering and validation.

ANNEXURE-1

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Sl. No.	Section	Clause Reference	Query	OIL's Response
58	Solution Scope	Artificial Lift - ESP Optimization 28 ESP wells in scope comprise 8 existing + 20 upcoming wells - i.e. the majority (71%) of the ESP scope is not yet drilled/completed.	Please confirm, consistent with the equivalent queries raised for SRP/Plunger future wells, what 'inherent provision for future instrumentation' concretely requires for the 20 upcoming ESP wells at bid stage - spare edge/RTU platform capacity, pre-agreed unit pricing per incremental well, or a documented onboarding procedure only - and confirm the intended timeline/phasing by which these 20 wells are expected to come online relative to the contract's Implementation and AMC periods.	Oil will review and revert
59	Scope Clarification	AI-Based Digital Well Integrity Management 'AI based digital well integrity management will be implemented for all existing & upcoming wells of OIL' - i.e. potentially all 700 wells, unlike the artificial-lift modules which are scoped to specific well counts (48/53/75/28).	Please confirm the exact well count in scope for the Well Integrity module (all 700 wells, or only the 380 sensorized wells, or a different subset), and specify which well-construction/completion data sources (well schematics, barrier diagrams, completion reports). OIL should provide the same.	OIL will provide this during engineering phase
60	Deliverable Clarification	AI-Based Digital Well Integrity Management 'System design must be aligned with industry standards such as API RP 90, and local regulatory frameworks.'	Please confirm if OIL has additional internal well-integrity governance standards, MAASP calculation methodology, or barrier-classification schema (beyond API	OIL will provide this during engineering phase

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			RP 90) that the solution must specifically conform to.	
61	Deliverable Clarification	AI-Based Digital Well Integrity Management KPI & Acceptance: 1. Time to alert for annulus anamolies < 5 min from deviation. 2. Correct classification of Barrier State >90%	W.r.t KPI & Acceptance criteria. Kindly share the basis. Also please provide estimated volume and quality of historical data is available for wells to train ML/AI model. Mainly pressure trend.	OIL will review and revert
62	Scope Clarification	Virtual Flow Metering (VFM) VFM must 'estimate oil, gas, and water flow rates... for all the wells of OIL' - i.e. all 700 wells, again without a stated well-count boundary matched to a specific hardware BOQ.	Please confirm the exact well count for VFM deployment (all 700, or the 380 sensorized wells only) and the minimum frequency/quality of physical well tests OIL can guarantee for VFM model calibration and drift validation (Clause 4.1.6.2 / 4.2.10 reference well-test-based validation).	VFM shall be scalable to all OIL wells as stated in Clauses 4.1.6 and 4.2.10. The tender does not specify a guaranteed well-test frequency
63	Deliverable Clarification	Virtual Flow Metering (VFM) Accuracy Target Acceptance:- Oil & Water Rate MAPE <10-15% on validation of wells Gas Rate MAPE< 15-20% target adjustable per Well Class	To up keep the model. Offline calibration using well test is required. What is the frequency of well test is planned.	Well test frequency is atleast once in a month.
64	Deliverable Clarification	Integrated Production System Modelling (IPSM) / Flow Assurance Flow assurance requires 'first principle-based simulation model for the prediction of wax deposition and	Please confirm whether OIL can provide fluid PVT/wax-appearance-temperature/hydrate-formation lab data (compositional analysis, WAT, hydrate curves) for the fields in scope, or whether fluid	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		hydrate formation' and explicitly states 'correlation or empirical based methods shall not be deemed acceptable.'	characterization sampling/lab-testing is within the bidder's scope and budget.	
65	Scope Clarification	Integrated Production System Modelling (IPSM) / Flow Assurance IPSM must model 'wells, surface networks and gas lift network modelling, reservoirs, lift systems, and production facilities' across the field.	Please confirm the well count and facility count (GGS/OCS/CGGS/EPS etc.) to be included in the IPSM network model, and whether OIL will provide as-built P&IDs/network topology data or whether field survey/data collection for network modelling is within the bidder's scope.	OIL will provide the required data.
66	Acceptance Compliance	Cross-Cutting (All Artificial Lift Types) Only the ESP module (Cl. 4.2.8) carries explicit, numeric acceptance KPIs (PI-excursion reduction ≥30%, energy-intensity improvement ≥5%, gas-lock precision/recall ≥80%/≥80%); SRP, Plunger Lift and Gas Lift/AGLO have no equivalent numeric performance targets anywhere in Section 2, despite comparable optimization objectives (production uplift, energy efficiency, anomaly-detection accuracy) being described qualitatively for each.	Please confirm whether OIL intends to issue equivalent explicit, numeric KPIs for SRP, Plunger Lift and Gas Lift optimization (analogous in structure to the ESP KPI set), and, regardless of whether numeric KPIs are added, please confirm OIL's intended FAT/SAT test-and-acceptance plan structure for artificial lift as a whole - i.e. will there be one consolidated AL acceptance test procedure covering mode-transition, fail-safe, and anomaly-/fault-detection demonstration for all four disciplines, or four independent test procedures.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
67	23	23 Contract	Please confirm that the SOR BOQ price break up will be part of the contract. Successful bidder to be allowed to bill and dispatch as per the same. If SOR BOQ price breakup is not a part of the contract, price breakup as per SOR BOQ to be approved by OIL post award of contract to enable bill and dispatch according to the same. Please confirm	The contract will incorporate the accepted Schedule of Rates. Billing and payment shall be strictly as per the contractual BOQ and payment milestones.
68	29	33.4 and 33.5 Input tax credit of GST	Are all the scope mentioned in the tender and specifically SOR BOQ line items have input GST credit for OIL? Or if partially input GST credit is available? If partially available, provide the sl. Nos. of SOR BOQ. Also confirm that GST will be paid as per prevailing statutory guidelines from time to time at the time of billing	None of the item qualify for the Input tax credit.
69	38	2.2 Mobilisation period	Please refer the below query on clause 9.2: Instrumentation in phase 1 and provide amendment accordingly	OIL will review and revert on the Implementation timeline
70	43	4.14 Land border	Please provide copy of ministry of finance order mentioned.	Bidder can access it from MOF website.
71	44	5.3	whether the quantity of various instruments / hardware other than various operation mentioned in price	To be guided by tender terms

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		Quantity for various operations in price bid format B	bid format B are also for valuation purpose only? Is the successful bidder paid as per the actual quantity supplied or required for the project? Is it not mandatorily necessary to supply all the quantity of instruments / hardware mentioned if found to be not required for completion of the scope after detailed engineering as per OIL approval?	
72	153	4.2.18 Installation scope: All electrical instruments to be installed in hazardous locations should adhere to OMR 2017 guidelines	We understand as per OMR 2017, IECEX / ATEX or such international certification is sufficient and PESO certification is not mandatory. Please confirm	All electrical instruments in hazardous locations shall comply with OMR 2017 and Clause 4.2.26. Test reports from the permitted accredited/notified bodies shall be submitted as specified.
73	149	4.2.13.11 Dynamometer	Please provide Load capacity for each of 36nos	To be confirmed during field visit & detailed engineering phase
74	149	4.2.13.11 Dynamometer	If any controller is required for each of 36nos	All identified SRP wells within the DOF scope shall be provided with EDGE-enabled autonomous optimization capability. Accordingly, the SRP optimization architecture shall support autonomous, closed-loop optimization at each well, based on available

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				real-time operating and performance data. The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual well operating conditions. The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure necessary for implementation of autonomous SRP

Sl. No.	Section	Clause Reference	Query	OIL's Response
				optimization across all identified wells.
75	149	4.2.13.11 Dynamometer	If controller is required, please provide full specification	All identified SRP wells within the DOF scope shall be provided with EDGE-enabled autonomous optimization capability. Accordingly, the SRP optimization architecture shall support autonomous, closed-loop optimization at each well, based on available real-time operating and performance data. The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual

Sl. No.	Section	Clause Reference	Query	OIL's Response
				well operating conditions. The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure necessary for implementation of autonomous SRP optimization across all identified wells.
76	149	4.2.13.11 Dynamometer	For dynamometer and controller, please provide full functional flow chart for automation based on dynamometer output	All identified SRP wells within the DOF scope shall be provided with EDGE-enabled autonomous optimization capability. Accordingly, the SRP optimization architecture shall support autonomous, closed-loop optimization at each well, based on available real-time operating and performance data. The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other

Sl. No.	Section	Clause Reference	Query	OIL's Response
				dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual well operating conditions. The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure necessary for implementation of autonomous SRP optimization across all identified wells.
77	149	4.2.13.11 Dynamometer	Please confirm the availability of grid / dg/ gg / 24 vdc / AC power at SRP well	OIL will provide the necessary data
78	149	4.2.13.11 Dynamometer	If SRP VFD has to act based on Dynamometer output, please provide functional flow chart and specifications	All identified SRP wells within the DOF scope shall be provided with EDGE-enabled autonomous optimization capability. Accordingly, the SRP optimization architecture

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				shall support autonomous, closed-loop optimization at each well, based on available real-time operating and performance data. The bidder shall be responsible for supplying and installing all necessary instrumentation and associated hardware, including VFD, RPC, dynamometer and/or other dedicated control and measurement equipment, as applicable, along with EDGE devices, control systems and data-acquisition infrastructure, required to achieve autonomous optimization for all identified SRP wells, considering the specified scope and individual well operating conditions. The bidder shall ensure that the proposed solution provides the complete end-to-end instrumentation, control, EDGE computing and communication infrastructure necessary for implementation of autonomous SRP

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				optimization across all identified wells.
79	149	4.2.13.10 VFD for SRP pumps	For each of the 28 VFD's, please provide the KW rating. Since the cost vary hugely this basic detail is critically important	OIL will provide relevant data
80	149	4.2.13.10 VFD for SRP pumps	Please confirm the availability of 415vac at SRP well from grid / dg/ gg power or other source by OIL	OIL will review and revert
81	151	4.2.13.10 VFD for ESP	For each of the 28 VFD's, please provide the KW rating. Since the cost vary hugely this basic detail is critically important	OIL will review and revert
82	151	4.2.13.10 VFD for ESP	Please confirm the availability of 415vac at ESP well from grid / dg/ gg power or other source by OIL	OIL will review and revert
83	149	Vendors / OEM's / service providers of instruments / hardware /service	Please provide the list of manufacturers / entities / companies who are not acceptable / black listed / banned / holiday listed by OIL	Blacklisted company list is available on OIL's website.
84	45	5.14 Customs duty	Please provide copies of all the notifications referred in the tender under this clause and latest amendments if any.	Bidders shall refer to Customs Notification No. 45/2025-Cus dated 24.10.2025 and amendments prevailing at bid closing.
85	45	5.14 Customs duty	Also provide list of items in the SOR BOQ for which customs duty benefits / exemptions / concessions are available	Concessional duty applies only to eligible items in List-16 of Customs Notification No. 45/2025-Cus. Bidders shall

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				identify eligible imported items in Proforma-A.
86	49	7.2 Purchase preference policy	Please provide copies of all the notifications referred in the tender under this clause and latest amendments if any	The applicable purchase-preference orders and notification numbers are specified in Clause 7.2 and shall be complied with.
87	97	3.1a sensor installation progress in 77 wells	If these installations get delayed which is not attributable to bidders, suitable delivery extensions to be provided by OIL	Any extension shall be governed by the tender provisions, including accepted reasons beyond the bidder's control and OIL approval
88	99	4.1.1 Instrumentation installation	Several sensors have been listed. Not able to cross check if the SOR BOQ is matching as further bifurcation of well wise details are not given. Please confirm all the listed sensors required to meet the functionality are reflected in SOR BOQ in page 210 and 211	Well-wise details shall be provided
89	102	4.1.4.1.2 Field instrumentation	Several sensors have been listed. Not able to cross check if the SOR BOQ is matching as further bifurcation of well wise details are not given. Please confirm all the listed sensors required to meet the functionality are reflected in SOR BOQ in page 210 and 211	Installation-wise details shall be provided
90	102 & 151	4.1.4.1.2, 4.2.17 Suitable rated VFD	For all the 28 VFD's SOR BOQ #25 please provide KW rating individually as it makes huge price	To be confirmed during field visit & detailed engineering phase

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			difference. If not possible individually, pls provide std common maximum KW rating for all 28nos to be considered for bidding purpose and evaluation.	
91	102 & 151	4.1.4.1.2, 4.2.17 Suitable rated VFD	Also confirm availability of 3 phase ac power at all well sites requiring VFD	To be confirmed during field visit & detailed engineering phase
92	102 & 149	4.1.4.1.2, 4.2.13.10 Suitable rated VFD	For all the 28 VFD's, SOR BOQ #26, please provide KW rating individually as it makes huge price difference. If not possible individually, pls provide std common maximum KW rating for all 28nos to be considered for bidding purpose and evaluation	To be confirmed during field visit & detailed engineering phase
93	102 & 149	4.1.4.1.2, 4.2.13.10 Suitable rated VFD	Also confirm availability of 3 phase ac power at all well sites requiring VFD	To be confirmed during field visit & detailed engineering phase
94	108	4.1.4.2.3 Field instrumentation	Several sensors have been listed. Not able to cross check if the SOR BOQ is matching as further bifurcation of well wise details are not given. Please confirm all the listed sensors required to meet the functionality are reflected in SOR BOQ in page 210 and 211	Installation-wise details shall be provided
95	110	4.1.4.3.2 optional well head and annulus sensors	Please provide detailed specifications of the same. This instrument is not listed in SOR BOQ in page 210 and 211. Please amend the same	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
96	111	4.1.4.4.10	As the detailed break up of well sites is not available in SOR BOQ, please confirm all these instruments are accounted in the SOR BOQ in page 210 and 211	Wellwise details will be provided.
97	123	NOTES. Point 4	OIL to confirm availability of LTE/4G/5G at each well site which are strong enough to transmit data.	OIL will provide site wise well details bidder has to assess connectivity.
98	135	4.2.7.3.2, 3, 4 Pressure, temperature measurement, valves	As the detailed break up and location of individual well sites is not available in SOR BOQ, please confirm all these instruments are correctly accounted in the SOR BOQ in page 210 and 211. In one month time it is not practically possible for the bidder to survey all the 290 wells	Wellwise details will be provided.
99	140	4.2.13.2 Stability for 5 years	As the contract period is for 1+5 years and practicall much more, stability factor of +/-0.2% of span should be defined for more than 6 years, typically 10 years. Please amend and add the specification for the betterment of OIL and all manufacturers are offering the same	OIL will review and revert
100	140, 141	4.2.13.2 and 4.2.13.3 Wireless trx Enclosure: IP65	Since installation of these transmitters are outdoor and in many places unmanned open field, it will be ideal to be additionally metallic enclosure. Kindly amend and add the specification	The minimum enclosure requirement remains as specified. Equivalent or superior solutions may be proposed with technical justification under Note 1 to Clause 4.2.26.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
101	141, 142	4.2.13.2 and 4.2.13.3 Wireless Transmitter power	From the future point of view of advantage for OIL, if the battery for all the wireless temp / pressure transmitters are common for this project, lesser spare inventory will help OPEX savings for OIL. Kindly amend and add the specification mentioning all wireless pressure / temperature instruments used in this project to have universally common usable/ interchangeable battery. All manufacturers of ISA100 / HART instruments have this to be neutral specification without favoring any vendor	The tender does not require a common interchangeable battery across all transmitter makes
102	140	4.2.13.2 Tx. diaphragm & other wetted parts: SS316, Hastelloy C-276, SS316L or better	Diaphragm of the remote Seal MOC Shall be SS316L & Flange MOC:SS316/L .	Will be finalised during detail engineering phase
103	140	4.2.13.2 Area Classification Certification: In accordance with OMR- 2017 Guidelines for use in Zone-2 Gr. IIA/IIB, T3	Offered Transmitters complied to Ex ia op is IIC T4 Ga Enclosure: IP66/IP67	The specified wetted-part materials are SS316, Hastelloy C-276, SS316L or better. Equivalent/superior proposals require technical justification
104	141	4.2.13.3 1. Stability: +/- 0.1% of URL for 05 years 2. Rangeability: 50:1 or better	Not applicable for Temperature Transmitters of any manufacturer	Tender specification prevails

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Sl. No.	Section	Clause Reference	Query	OIL's Response
105	141	4.2.13.3 Guidelines for use in Zone-2 Gr. IIA/IIB, T3	Offered Transmitters complied to Ex ia op is IIC T4 Ga Enclosure: IP66/IP67	Compliance shall be in accordance with OMR 2017 and the specified hazardous-area requirements. Equivalent or superior certification may be proposed with supporting documents
106	141	4.2.13.3 Thermowell insertion length	Insertion length to be provided for each temperature trx	Line size will be provided.
107	147	4.2.13.8 Switch over time	Switch over time to be mentioned which is very important for redundancy. We suggest one second. Kindly amend and include	The gateway shall be redundant with minimum changeover time. The bidder shall specify the offered changeover time
108	147	4.2.13.8 Hazardous area for gateway	Not required as it will be installed in the safe area	The gateway electronic housing is specified for safe-area/control-room installation…It will be installed in safe area.
109	177 to 179	Annexure-A and B connectivity of wells	how many wells is connected to each plinth	OIL will review and revert
110	177 to 179	Annexure-A and B Gateway	Is Gateway is required for 70 Installation area?	OIL will review and revert
111	177 to 179	Annexure-A and B Gateway Quantity	Briefing required why only 200 Nos. of gateway is considered with 214 plinths and installation area (qty not specified in tender. Please specify)	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
112	177 to 179	Annexure-A and B Gateway Quanity	in each plinth gateway is required as well in installation area, clarification is required	Gateway will be required for installation also.
113	161	4.2.25 Spares Philosophy	please elaborate on spares philosophy	OIL will review and revert
114	177 to 179	Annexure-A and B IO measuring devices	2D plot plan is required for each OCS with tagging of the instruments	To be provided during detailed engineering.
115	177 to 179	Annexure-A and B IO measuring devices	In each installations how many wireless devices to be installed and how many installations are there	To be provided during detailed engineering.
116	179	Annexure-B Eastern, Western Rajasthan Field	Need the clusters of the wells division	Well list will be provided.
117	98	4.1 Solution Description	understand only 290 wells required instrumentation	No. The DOF covers 700 wells; 380 guarded and producing wells are prioritized for sensorization. Annexure-A, to be revised.
118	98	4.1 Solution Description	Balance Connectivity details to be provided	OIL will review and revert
119	98	4.1 Solution Description	Should we consider the hardware for connectivity of the wells	Yes. The bidder shall provide the complete connectivity equipment and services specified in Clauses 4.2.1.3 and 4.2.1.6
120	98	4.1 Solution Description	Balance wells only software is required?	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
121	142, 143	4.2.13.4 Magnetic flow meter Lining Material	Please accept PFA lining with reinforced SS mesh to handle harsh process which is superior to PTFE	OIL will review and revert
122	142, 143	4.2.13.4 Magnetic flow meter Accuracy	Industry standard for the application is 0.3% of rate. Please accept	Tender specification prevails
123	142, 143	4.2.13.4 Magnetic flow meter Tube material	SS304, as it is not a wetted part. Please accept	Accepted.
124	142, 143	4.2.13.4 Magnetic flow meter Flange type and material	SS304, as it is not a wetted part. Please accept	Accepted.
125	142, 143	4.2.13.4 Fluid temperature	40 Deg.C as experienced and based on previous installations. Please confirm	The specified maximum fluid temperature is 70°C
126	142.143	4.2.13.4 Magnetic flow meter Electrode type	2 electrode for measurement and two grounding rings for grounding purpose of the pipeline surges. Ground rings take care of the entire diameter of the pipe instead of pointed area in case of electrode. Please amend or accept this specification as it is better	Will be finalised during detail engineering phase
127	143, 144	4.2.13.5 MPFM	Please clarify the following points for MPFM. In the limited tender time of one month, it is not possible for the bidder to survey all the sites to correctly estimate. If not possible to provide individually, please confirm what size and parameters to be	Line size, operating temp/pressure and Max flow rate will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			considered uniformly for all 11 nos for bidding and evaluation purpose?	
128	143, 144	4.2.13.5 Exisiting pipe size	Pipe size; We understand venturi size to be 2 inch and process connection to be 4inch. All 11 nos will be considered with this size.	Line size, operating temp/pressure and Max flow rate will be provided.
129	143, 144	4.2.13.5 Density	This features is specific to a particular manufacturer and restrictive. Specification will favor the specific vendor only. Kindly remove this specification favoring a vendor and restricting other reputed proven vendors from participation. Other manufacturers don't need the density measurement to achieve the desired result and is again restricting to a vendor. Kindly amend the specification removing these points making to participative	Tender specification prevails
130	143, 144	4.2.13.5 Measurement function	Kindly note that as per Handbook of Multiphase Flow Metering, Section 7 Technology, defines various measurement principles that can be adopted by MPFM manufacturers. With the tender doc specification written as "water cut using electrical impedance" it will limit the MPFM vendor to one manufacturer only which is restrictive. Kindly remove the same. Hence please allow	Tender specification prevails

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			manufacturers to follow the guidelines in handbook of MPFM.	
131	143, 144	4.2.13.5 MPFM	Please provide Operating Pressure (Min/Norm/Max)	Line size, operating temp/pressure and Max flow rate will be provided.
132	143, 144	4.2.13.5 MPFM	Please provide Design Pressure	Line size, operating temp/pressure and Max flow rate will be provided.
133	143, 144	4.2.13.5 MPFM	Please provide Operating Temperature (Min/Norm/Max) ° C	Line size, operating temp/pressure and Max flow rate will be provided.
134	143, 144	4.2.13.5 MPFM	Please provide Design Temperature ° C	Line size, operating temp/pressure and Max flow rate will be provided.
135	143, 144	4.2.13.5 MPFM	Please provide Viscosity (Min/Norm/Max) Cp	Line size, operating temp/pressure and Max flow rate will be provided.
136	143, 144	4.2.13.5 MPFM	Please provide Density kg/m3	Line size, operating temp/pressure and Max flow rate will be provided.
137	143, 144	4.2.13.5 MPFM	Please whether it is Sour Service = YES OR NO	Line size, operating temp/pressure and Max flow rate will be provided.
138	143, 144	4.2.13.5 MPFM	Watercut %	Line size, operating temp/pressure and Max flow rate will be provided.
139	143, 144	4.2.13.5 MPFM	Gas mmscfd	Line size, operating temp/pressure and Max flow rate will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
140	143, 144	4.2.13.5 MPFM	GOR at max oil flow	Line size, operating temp/pressure and Max flow rate will be provided.
141	143, 144	4.2.13.5 MPFM	GOR at min oil flow	Line size, operating temp/pressure and Max flow rate will be provided.
142	143, 144	4.2.13.5 MPFM	GLR at Max oil flow scfd/bbl	Line size, operating temp/pressure and Max flow rate will be provided.
143	143, 144	4.2.13.5 MPFM	GLR at min oil flow scfd/bbl	Line size, operating temp/pressure and Max flow rate will be provided.
144	143, 144	4.2.13.5 MPFM	Oil specific gravity	Line size, operating temp/pressure and Max flow rate will be provided.
145	143, 144	4.2.13.5 MPFM	Water specific gravity	Line size, operating temp/pressure and Max flow rate will be provided.
146	143, 144	4.2.13.5 MPFM	Gas densities	Line size, operating temp/pressure and Max flow rate will be provided.
147	143, 144	4.2.13.5 MPFM	Oil viscosity at 3 different temperatures	Line size, operating temp/pressure and Max flow rate will be provided.
148	143, 144	4.2.13.5 MPFM	Temperature	Line size, operating temp/pressure and Max flow rate will be provided.
149	143, 144	4.2.13.5 MPFM	Viscosity	Line size, operating temp/pressure and Max flow rate will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
150	143, 144	4.2.13.5 MPFM	H2S in flow	Line size, operating temp/pressure and Max flow rate will be provided.
151	143, 144	4.2.13.5 MPFM	CO2 in flow	Line size, operating temp/pressure and Max flow rate will be provided.
152	143, 144	4.2.13.5 MPFM	Paraffin in flow	Line size, operating temp/pressure and Max flow rate will be provided.
153	143, 144	4.2.13.5 MPFM	Crude pour point	Line size, operating temp/pressure and Max flow rate will be provided.
154	143, 144	4.2.13.5 MPFM	Inlet pipe size	Line size, operating temp/pressure and Max flow rate will be provided.
155	143, 144	4.2.13.5 MPFM	Outlet pipe size	Line size, operating temp/pressure and Max flow rate will be provided.
156	143, 144	4.2.13.5 Measurement function	Already OIL India has been using MPFM based on coriolis principle without any problem and satisfactorily for nearly an year. No complaint / issue has been raised by OIL in writing so far. Hence we request OIL to approve MPFM based on coriolis principle also as there is no OIL document adversary to the usage of it in OIL projects. The specification will be same as the system existing / working in OIL.	Tender terms prevails

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Sl. No.	Section	Clause Reference	Query	OIL's Response
157	98	3.4.4 MPFM	This tender document mentions the availability of such MPFM and no problem has been stated in this tender. Hence please include coriolis based MPFM as an approved technology for this tender also	Tender terms prevails
158	143, 144	4.2.13.5 Instrument Type	SKID Type Sytem, Corioliss measurement technology to be added as it is already proven in OIL	Tender terms prevails
159	143, 144	4.2.13.5 Measurement Function	non-gama with Corioliss measurement technology to be added as it is proven in OIL	Tender terms prevails
160	143, 144	4.2.13.5 Flow element type	Corioliss measurement technology to be added as it is proven in OIL	Tender terms prevails
161	143, 144	4.2.13.5 Meter body wetted parts materials	SS316L	Tender terms prevails
162	143, 144	4.2.13.5 Process connection material	SS316L	Tender terms prevails
163	143, 144	4.2.13.5 Meter Orientation	Horizontal	Tender terms prevails
164	143, 144	4.2.13.5 Flow Direction	Horizontal	Tender terms prevails
165	143, 144	4.2.13.5 Isolation Valve Type	Isolation Ball Valve for Flow Transmitter, 2 way valve manifold for pressure Transmitter and ball valve for drain	Tender terms prevails

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Sl. No.	Section	Clause Reference	Query	OIL's Response
166	143, 144	4.2.13.5 MVT output	Modbus TCP	Tender terms prevails
167	143, 144	4.2.13.5 Gamma source	non-gama with Corioliss measurement technology to be added	Tender terms prevails
168	143, 144	4.2.13.5 Detector	Corioliss measurement technology	Tender terms prevails
169	143, 144	4.2.13.5 Gamma life	non-gama with Corioliss measurement technology to be added	Tender terms prevails
170	143, 144	4.2.13.5 Function	the flow of gas is calculated by the GVF and flow of the mixture is measured by Coriollis lines	Tender terms prevails
171	143, 144	4.2.13.5 Power Consumption	Less than 60 Watts	Tender terms prevails
172	143, 144	4.2.13.5 Enclosure protection:	HMI Group II – Category 3 G D – Zone 2/22 Ex nA IIC T6 Gc X Ex tc IIIC T 70°C Dc X 0°CdTad50°C for vertical mounting IDE Ex II 2G – Ex eb IIC Gb Ex II 2D – Ex tb IIIC Db	Hazardous-area and enclosure requirements shall comply with OMR 2017 and the tender specification.
173	145	4.2.13.7 Line Size	Confirm the line size with respect to the flow rate of 25 to 2500 Kilo Litre per day	To be finalised during detailed engineering
174	145	4.2.13.7 Size and Rating	mentioned as 4" class #300 B16.5, please provide confirmation for SS3034 flange	Ternder terms prevails

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
175	145	4.2.13.7 Sensor Housing	for the environment in OIL, only SS304 preferred	To be finalised during detailed engineering
176	145	4.2.13.7 Flange Material	SS304	Flange material shall be SS316.
177	146	4.2.13.7 Heat tracing and jacketing	Please confirm Availabity of steam service for steam heat tracing? Or is it electrical heat tracing. Please confirm.	Electrical heat tracing is required.
178	146	4.2.13.7 Transmitter	Mounting : Remote only since heat tracing is required. Please accept	Remote or integral transmitter mounting is permitted.
179	146	4.2.13.7 Transmitter	Not applicable as per the previous supplied order : Transmitter has to be built in with API table for 15 degC 1 Atmospheric compensations.	The transmitter shall include API table compensation at 15°C and one atmosphere.
180	146	4.2.13.7 Accuracy	For the application, established industry standards are as below. Please confirm acceptance. Mass flat accuracy: +/- 0.1% Volume Accuracy: +/- 0.15% Density accuracy: ± 0.0005 g/cm³	Tender terms prevails
181	146	4.2.13.7 Process condition : Pressure drop :	For the application, normally 0.5 Kg/cm2 is acceptable. Please confirm	Tender terms prevails
182	146	4.2.13.7 Others : Signal Cable / Power Cable:	mention the distance of Signal cable as 15 meters with Remote Transmitter, Communication with Remote transmitter to UPS	Bidder shall supply signal/power cable; approximate distance between UPS room and meter is 200 metres.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			room/Control room is through MODBUS RS485	
183	146	4.2.13.7 Others : Piping:	Please specify the size to go for Reducer/Expander is applicable or not	To be finalised during detailed engineering
184	146	4.2.13.7 Others : Mounting Accessories	please specify : is it only for mounting bracket for Remote Transmitter?	Vendor shall supply all required mounting accessories.
185	146	4.2.13.7 Others : Calibration	For imported makes meters are to be calibrated at a calibration rig which is accredited to ISO/IEC 17025 at their manufacturing facility. Please confirm acceptance as calibration again at FCRI has no value addition, resulting in delayed delivery and additional cost	Calibration shall be at an ISO/IEC 17025 accredited, gravimetric facility; if the bidder lacks its own facility, FCRI calibration shall be provided.
186	144, 145	4.2.13.6 Watercut meter	Please clarify the following points for Watercut meter. In the limited tender time of one month, it is not possible for the bidder to survey all the sites to correctly estimate. If not possible to provide individually, please confirm what size to be considered uniformly for all 34 nos for bidding and evaluation purpose?	OIL will provide relevant data
187	144, 145	4.2.13.6 Watercut meter	Being not a seacost corrosive geographical location, please accept epoxy Coated Low Copper Aluminium metallic enclosure also which will sustain corrosion and suitable for outdoor installation.	Tender specification prevails

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			SS316 has no additional benefit except increased cost	
188	144, 145	4.2.13.6 Watercut meter	Please provide Line Size/Process end Connection for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
189	144, 145	4.2.13.6 Watercut meter	Please provide Operating Pressure (Min/Norm/Max) for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
190	144, 145	4.2.13.6 Watercut meter	Please provide Design Pressure for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
191	144, 145	4.2.13.6 Watercut meter	Please provide Operating Temperature (Min/Norm/Max) ° C for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
192	144, 145	4.2.13.6 Watercut meter	Please provide Design Temperature ° C for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
193	144, 145	4.2.13.6 Watercut meter	Please provide Viscosity (Min/Norm/Max) Cp for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
194	144, 145	4.2.13.6 Watercut meter	Please provide Density kg/m3 for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
195	144, 145	4.2.13.6 Watercut meter	Sour Service = YES OR NO for each of 34nos	Line size, operating temp/pressure and Max flow rate will be provided.
196	144, 145	4.2.13.6 Watercut meter	Please accept industrial standard sensity common to many manufactuers = 0.01%	Tender specification prevails

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
197	144, 145	4.2.13.6 Watercut meter	please provide type of fluid and phase for each of 34nos	The fluid phase is crude oil.
198	145 to 147	4.2.13.7 Mass flow meter Quantity - 2nos	Please confirm considering this, the qty of 11nos in SOR BOQ in page 210 and 211 is arrived and accounted.	Final quantity is 11 nos.
199	145 to 147	4.2.13.7 Line size 4/6/8 inches	Please confirm out of 11nos in SOR BOQ in page 210 and 211 , how many are 4 inch, how many are 6 inch and how many are 8 inches. In the limited tender time of one month, it is not possible for the bidder to survey all the sites to correctly estimate. If not possible to provide individually, please confirm what size to be considered uniformly for all 11 nos for bidding and evaluation purpose?	Line size, operating temp/pressure and Max flow rate will be provided.
200	145 to 147	4.2.13.7 Heat tracing and jacketing	Confirm if it is steam based or electrical heat tracing. Confirm if steam is available or only electric power is available at 11 sites of installation. In the limited tender time of one month, it is not practically possible for the bidder to survey all the sites to correctly estimate	Heat tracing and jacketing are required. The tender does not specify steam or electrical tracing.
201	145 to 147	4.2.13.7 Mass flow meter	Please provide Line Size/Process end Connection for each of 11nos	Line size, operating temp/pressure and Max flow rate will be provided.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
202	145 to 147	4.2.13.7 Mass flow meter	Please provide Operating Pressure (Min/Norm/Max) for each of 11nos	Line size, operating temp/pressure and Max flow rate will be provided.
203	145 to 147	4.2.13.7 Mass flow meter	Please provide Design Pressure for each of 11nos	To be finalised during detailed engineering
204	145 to 147	4.2.13.7 Mass flow meter	Please provide Operating Temperature (Min/Norm/Max) ° C for each of 11nos	To be finalised during detailed engineering
205	145 to 147	4.2.13.7 Mass flow meter	Please provide Design Temperature ° C for each of 11nos	To be finalised during detailed engineering
206	145 to 147	4.2.13.7 Mass flow meter	Please provide Viscosity (Min/Norm/Max) Cp for each of 11nos	To be finalised during detailed engineering
207	145 to 147	4.2.13.7 Mass flow meter	Please provide Density kg/m3 for each of 11nos	To be finalised during detailed engineering
208	145 to 147	4.2.13.7 Mass flow meter	Please provide Operating flow (Min/Norm/Max) for each of 11nos	To be finalised during detailed engineering
209	145 to 147	4.2.13.7 Sensor Housing	for the environment in OIL, only SS304 preferred. Please accept	OIL will review and revert.
210	145 to 147	4.2.13.7 Mass flow meter Transmitter	Mounting : Remote only because of heat tracing for each of 11nos	Remote or integral transmitter mounting is permitted.
211	145 to 147	4.2.13.7 Mass flow meter Transmitter	Not applicable as per the previous supplied order : Transmitter has to be built in with API table for 15 degC 1 Atmospheric compensations.	Tender specification prevails

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Sl. No.	Section	Clause Reference	Query	OIL's Response
212	145 to 147	4.2.13.7 Mass flow meter Accuracy	Please accept the industry standard for this application: Mass flat accuracy: +/- 0.1% Volume Accuracy: +/- 0.15% Density accuracy: ± 0.0005 g/cm³	Tender specification prevails
213	145 to 147	4.2.13.7 Process condition : Pressure drop :	Please accept the industry standard for this application 0.5 Kg/cm2	Tender specification prevails
214	145 to 147	4.2.13.7 Others : Signal Cable / Power Cable:	mention the distance of Signal cable as 15 meters with Remote Transmitter, Communication with Remote transmitter to UPS room/Control room is through MODBUS RS485	Bidder shall supply signal/power cable; approximate distance between UPS room and meter is 200 metres.
215	145 to 147	4.2.13.7 Others: mass flow meter Calibration	For imported makes meters are to be calibrated at a calibration rig which is accredited to ISO/IEC 17025 at their manufacturing facility and by FCRI calibration not value addition is envisaged. It will only delay delivery and increase the cost	Tender specification prevails
216		Stores	We presume OIL will provide secured stores at least in installation locations under which wells are distributed. Please confirm	Storage will be in bidder's scope
217		Accommodation	Wherever possible, OIL to provide its guest house. Please confirm	Boarding and lodging are in bidder scope.
218	150	4.2.13.12 flow meter for gas lift	Please provide the following for all 48 meters individually. it is not practically possible for the bidder to	Gas-lift flowmeters shall comply with Clause 4.2.13.12. Site-specific parameters shall

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			survey all the 48 sites to correctly estimate. If not possible to provide individually, pls provide std common maximum parameters for all 48'nos to be considered for bidding purpose and evaluation	be finalized during detailed engineering.
219	150	4.2.13.12 Meter Type: Typically, orifice DP meter mass flow meter for gas-lift well measurement.	Please confirm if DP Type Flowmeters+ Orifice is accepted or if Multivariable Type Transmitters has to be quoted. If yes, amend the specification	Flow Computer to be considered. The offered package shall meet all measurement, calculation and integration requirements. Flow computer is an integral part of EDGE autonomous optimization system. Spec will be reviewed accordingly.
220	150	4.2.13.12 flow meter for gas lift	Line size, pipe line material and schedule of pipe for selecting orifice for each of 48nos	Line size, operating temp/pressure and Max flow rate will be provided.
221	150	4.2.13.12 flow meter for gas lift	Min, operating and max pressure for each of 48nos	Line size, operating temp/pressure and Max flow rate will be provided.
222	150	4.2.13.12 flow meter for gas lift	Min, operating and max temperature for each of 48nos	Line size, operating temp/pressure and Max flow rate will be provided.
223	150	4.2.13.12 flow meter for gas lift	Min, operating and max flow for each of 48nos	Line size, operating temp/pressure and Max flow rate will be provided.
224	150	4.2.13.12 flow meter for gas lift	Wetter part material for each of 48nos	To be finalised during detailed engineering

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
225	150	4.2.13.12 flow meter for gas lift	Please accept SS304 flanges for each of 48nos	Tender specification prevails
226	150	4.2.14 Actuated choke valves	For all 123 choke valves of SOR BOQ # 24 and 29, please provide the following individually. In the limited tender time of one month, it is not practically possible for the bidder to survey all the sites to correctly estimate. If not possible to provide individually, pls provide std common maximum parameters for all 123nos to be considered for bidding purpose and evaluation.	To be finalised during detailed engineering
227	150	4.2.14 Actuated choke valves	Clarify Angle Type or Inline Type for each of 123nos	To be finalised during detailed engineering
228	150	4.2.14 Actuated choke valves	Please provide the inlet and outlet nominal size, end connection type, flange standard/facing and pressure rating/class for each of 123nos	To be finalised during detailed engineering
229	150	4.2.14 Actuated choke valves	Please provide Line size for each of 123nos	To be finalised during detailed engineering
230	150	4.2.14 Actuated choke valves	Please provide Min, operating and max pressure upstream and downstream for each of 123nos	To be finalised during detailed engineering
231	150	4.2.14 Actuated choke valves	Please provide Min, operating and max temperature upstream and downstream for each of 123nos	To be finalised during detailed engineering

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
232	150	4.2.14 Actuated choke valves	Please provide Min, operating and max flow upstream and downstream for each of 123nos	To be finalised during detailed engineering
233	150	4.2.14 Actuated choke valves	Please specify the required Material of Construction (MOC) for body/bonnet, trim and other pressure-containing/wetted parts, or confirm that the manufacturer may propose suitable MOC based on the specified service conditions. for each of 123nos	To be finalised during detailed engineering
234	150	4.2.14 Actuated choke valves	Please confirm the Type of actuator: Electrical or pneumatic or hydraulic for each of 123nos	OIL will review and revert
235	150	4.2.14 Actuated choke valves	If actuator is pneumatic, confirm availability of air / gas supply for each of 123nos	OIL will review and revert
236	150	4.2.14 Actuated choke valves	If actuator is electric, confirm availability of electric AC power for each of 123nos	OIL will review and revert
237	150	4.2.14 Actuated choke valves	Please provide the necessary fluid/process data for valve sizing, including fluid composition, gas specific gravity/molecular weight, liquid density/API gravity, viscosity, Gas Oil Ratio/Gas Liquid Ratio and water cut, as applicable. for each of 123nos	To be finalised during detailed engineering
238	150	4.2.14 Actuated choke valves	Please confirm whether H_2S and/or CO_2 are present and provide their concentration/partial pressure, as	Only one field/Oil has notable H2S around 120 PPM.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			applicable. Please also confirm whether NACE MR0175 / ISO 15156 compliance is required. for each of 123nos	
239	150	4.2.14 Actuated choke valves	Please provide the expected sand/solids content and maximum particle size, if applicable for each of 123nos	To be finalised during detailed engineering
240	150	4.2.14 Actuated choke valves	Please confirm the required fail-safe action – Fail Open / Fail Close / Fail Last Position for each application for each of 123nos	To be finalised during detailed engineering
241	150	4.2.14 Actuated choke valves	Please specify the required control signal, position feedback signal and communication protocol for integration with the existing control system. for each of 123nos	To be finalised during detailed engineering
242	150	4.2.14 Actuated choke valves	Please provide the applicable hazardous-area classification, Gas Group, Temperature Class, IP rating and certification requirements for the actuator, positioner and associated electrical equipment. for each of 123nos	To be finalised during detailed engineering
243	150	4.2.14 Actuated choke valves	Is the required Cv/turndown known, or should we size from the flowing conditions above plus spare trim sets?	To be finalised during detailed engineering
244	150	4.2.14 Actuated choke valves	fluid composition, gas gravity, condensate/liquid content, CO_2/H_2S, sand/solids?	To be finalised during detailed engineering

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
245	150	4.2.14 Actuated choke valves	Is this valve for the surface choke / gas lift injection point, or is it the intermittent flow-control valve on a plunger-lift well?	OIL will review and revert
246	150	4.2.14 Actuated choke valves	What is the expected pressure drop across the valve? could ΔP exceed 50% of absolute upstream pressure?	To be finalised during detailed engineering
247	150	4.2.14 Actuated choke valves	Any anticipated cavitation, flashing, or hydrate/freezing concerns we should design the trim for?	To be finalised during detailed engineering
248	150	4.2.14 Actuated choke valves	Positioner/communication requirement, confirm Modbus (RTU/TCP?) or another protocol; any specific positioner brand/model or SCADA integration standard?	To be finalised during detailed engineering
249	150	4.2.14 Actuated choke valves	Signal type for position feedback and command (4–20 mA, HART, digital)	To be finalised during detailed engineering
250	150	4.2.14 Actuated choke valves	Which fail-safe action is required per site operating philosophy, fail open, fail closed, or fail last position?	To be finalised during detailed engineering
251	150	4.2.15 Production control valves	For all 75 valves of SOR BOQ # 28, please provide the following individually. In the limited tender time of one month, it is not practically possible for the bidder to survey all the sites to correctly estimate. If not possible individu to provideally, pls provide std common maximum parameters for all 123nos	Site visit is suggested

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			to be considered for bidding purpose and evaluation	
252	150	4.2.15 Production control valves	Clarify Angle Type or Inline Type. for each of 75nos	Site visit is suggested
253	150	4.2.15 Production control valves	Please provide the inlet and outlet nominal size, end connection type, flange standard/facing and pressure rating/class for each of 75nos	Site visit is suggested
254	150	4.2.15 Production control valves	Please provide Line size for each valve for each of 75nos	Site visit is suggested
255	150	4.2.15 Production control valves	Please provide Min, operating and max pressure upstream and downstream for each of 75nos	Site visit is suggested
256	150	4.2.15 Production control valves	Please provide Min, operating and max temperature upstream and downstream for each of 75nos	Site visit is suggested
257	150	4.2.15 Production control valves	Please provide Min, operating and max flow upstream and downstream for each of 75nos	Site visit is suggested
258	150	4.2.15 Production control valves	Please specify the required Material of Construction (MOC) for body/bonnet, trim and other pressure-containing/wetted parts, or confirm that the manufacturer may propose suitable MOC based on the specified service conditions. for each of 75nos	Site visit is suggested

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Sl. No.	Section	Clause Reference	Query	OIL's Response
259	150	4.2.15 Production control valves	Please confirm the Type of actuator: Electrical or pneumatic or hydraulic for each of 75nos	Site visit is suggested
260	150	4.2.15 Production control valves	If actuator is pneumatic, confirm availability of air / gas supply for each of 75nos	Site visit is suggested
261	150	4.2.15 Production control valves	If actuator is electric, confirm availability of electric AC power for each of 75nos	Site visit is suggested
262	150	4.2.15 Production control valves	Please provide the necessary fluid/process data for valve sizing, including fluid composition, gas specific gravity/molecular weight, liquid density/API gravity, viscosity, Gas Oil Ratio/Gas Liquid Ratio and water cut, as applicable. for each of 75nos	Site visit is suggested
263	150	4.2.15 Production control valves	Please confirm whether H_2S and/or CO_2 are present and provide their concentration/partial pressure, as applicable. Please also confirm whether NACE MR0175 / ISO 15156 compliance is required. for each of 75nos	Site visit is suggested
264	150	4.2.15 Production control valves	Please provide the expected sand/solids content and maximum particle size, if applicable. for each of 75nos	Site visit is suggested
265	150	4.2.15 Production control valves	Please confirm the required fail-safe action – Fail Open / Fail Close / Fail	Site visit is suggested

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			Last Position for each application for each of 75nos	
266	150	4.2.15 Production control valves	Please specify the required control signal, position feedback signal and communication protocol for integration with the existing control system. for each of 75nos	Site visit is suggested
267	150	4.2.15 Production control valves	Please provide the applicable hazardous-area classification, Gas Group, Temperature Class, IP rating and certification requirements for the actuator, positioner and associated electrical equipment. for each of 75nos	Site visit is suggested
268	150	4.2.15 Production control valves	Confirm the actuator to interface directly with the plunger-lift controller, or take commands from the plant SCADA/RTU?	Site visit is suggested
269	150	4.2.15 Production control valves	Gas gravity, condensate content, CO_2/H_2S, and expected sand/paraffin loading?	Site visit is suggested
270	151	4.2.16 Automated autocatcher	For all 75nos of SOR BOQ # 30, please provide the following individually. In the limited tender time of one month, it is practically impossible for the bidder to survey all the sites to correctly estimate. If not possible to provide individually, pls provide std common maximum parameters for all 75nos to be	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			considered for bidding purpose and evaluation	
271	151	4.2.16 Actuation Method as per tender: Typically, pneumatic or electronic actuation integrated with a plunger lift controller for automated release and catch sequencing.	Please confirm if the actuation has to be only electronic instead of either pneumatic or electronic for each of 75nos	OIL will review and revert
272	151	4.2.16 Automated autocatcher	If pneumatic, confirm availability of air/gas for actuation for each of 75nos	OIL will review and revert
273	151	4.2.16 Automated autocatcher	If electronic, confirm availability of AC / DC power at each well sites for each of 75nos	Bidder to provide solar power
274	151	4.2.16 Automated autocatcher	Please confirm the requirement of controllers for each of 75nos	The bidder shall provide an EDGE-driven autonomous Plunger Lift control system capable of converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-driven autonomous control system. The system shall acquire real-time wellhead pressure, casing pressure, flowline pressure, production-rate and plunger-status data, as applicable, and shall autonomously determine and optimize plunger cycle

Sl. No.	Section	Clause Reference	Query	OIL's Response
				parameters including shut-in time, opening time, plunger arrival, afterflow duration and cycle frequency. The EDGE controller shall continuously evaluate actual well response following each control action and shall adapt subsequent PL cycles based on real-time operating and production data. For PAGL wells, the system shall additionally support coordinated optimization of plunger-lift and gas-lift parameters. The system shall support closed-loop autonomous operation without requiring manual intervention for routine cycle optimization, while retaining operator supervisory control, configurable operating limits, manual override and fail-safe fallback modes.
275	151	4.2.16 Automated autocatcher	If controllers are required, please provide detailed specifications for each qty for each of 75nos	Controller requirements are specified under Clause 4.2.6 and shall be finalized during detailed engineering. The bidder shall provide an EDGE-driven autonomous Plunger Lift control system capable of

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-driven autonomous control system. The system shall acquire real-time wellhead pressure, casing pressure, flowline pressure, production-rate and plunger-status data, as applicable, and shall autonomously determine and optimize plunger cycle parameters including shut-in time, opening time, plunger arrival, afterflow duration and cycle frequency. The EDGE controller shall continuously evaluate actual well response following each control action and shall adapt subsequent PL cycles based on real-time operating and production data. For PAGL wells, the system shall additionally support coordinated optimization of plunger-lift and gas-lift parameters. The system shall support closed-loop autonomous operation without requiring manual

Sl. No.	Section	Clause Reference	Query	OIL's Response
				intervention for routine cycle optimization, while retaining operator supervisory control, configurable operating limits, manual override and fail-safe fallback modes.
276	151	4.2.16 Automated autocatcher	Please provide functional flow chart of automated autocatcher for each qty for each of 75nos	The control philosophy shall comply with Clauses 4.1.4.2 and 4.2.6. The bidder shall provide an EDGE-driven autonomous Plunger Lift (PL) control system capable of converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-driven autonomous control system integrated with the Integrated Production System Model (IPSM). The system shall acquire, validate and process real-time well and surface operating data, including wellhead/tubing pressure, casing pressure, flowline pressure, production rates, plunger status/arrival and other relevant well parameters, as applicable. The IPSM shall incorporate all plunger lift appropriate well

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				model to continuously evaluate the dynamic well operating condition, inflow/outflow behaviour, pressure response, liquid loading, plunger performance and production response. The EDGE controller shall use the IPSM-derived well-state information, together with real-time field measurements, to autonomously determine and optimize PL operating parameters, including shut-in time, opening time, plunger arrival/arrival criterion, afterflow duration and cycle frequency. Following each control action, the EDGE system shall continuously compare the predicted and actual well response and update/recalibrate the applicable well and PL model parameters, as required. The system shall adapt subsequent PL cycles based on real-time measurements, model predictions, production performance and predefined

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				well, equipment and process constraints. For Plunger-Assisted Gas Lift (PAGL) wells, the system shall additionally support integrated optimization of Plunger Lift and Gas Lift parameters through the IPSM, including coordinated optimization of PL cycle parameters and gas-lift injection rate/pressure/timing, as applicable, with the objective of maximizing sustainable well performance while maintaining specified operating and integrity constraints. The autonomous optimization shall be capable of operating in closed loop without manual intervention for routine cycle optimization. The system shall, however, retain operator supervisory control, configurable operating limits, approval/override functionality, manual operating mode and fail-safe fallback logic. All autonomous

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				control actions, model predictions, actual responses, parameter changes and optimization decisions shall be logged and made available through the EDGE/DOF platform for monitoring, analysis, audit and further optimization.
277	177	Annexure A	Plunger Lift Automation Controller:Plunger Lift Automation Controller with Remote access software is not included in the list of items in Annexure A. As an added safety and optimization feature, do you intend to have (i) a plunger arrival velocity sensor (ii) motor-valve and (iii) a throttling control system for the motor valve that modulates the production valve based on the measured plunger arrival velocity, for safer remote operation. If required please include the same in SOR BOQ. If not, we will not consider since it is not included	Required plunger-arrival sensors, actuated valves and autocatcher integration are already included in the scope under Clauses 4.1.4.2 and 4.2.6. The bidder shall include all necessary controllers and accessories for a complete solution. The bidder shall provide an EDGE-driven autonomous Plunger Lift control system capable of converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-driven autonomous control system. The system shall acquire real-time wellhead pressure, casing pressure, flowline pressure, production-rate and plunger-status data,

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				as applicable, and shall autonomously determine and optimize plunger cycle parameters including shut-in time, opening time, plunger arrival, afterflow duration and cycle frequency. The EDGE controller shall continuously evaluate actual well response following each control action and shall adapt subsequent PL cycles based on real-time operating and production data. For PAGL wells, the system shall additionally support coordinated optimization of plunger-lift and gas-lift parameters. The system shall support closed-loop autonomous operation without requiring manual intervention for routine cycle optimization, while retaining operator supervisory control, configurable operating limits, manual override and fail-safe fallback modes.
278	154	4.2.19 4. Care of works	Responsibility shall be limited to the area of work involved, not all equipment and pipelines as	JSA, bridging document and hinderance register will be followed

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			mentioned where bidder's work is not involved	
279	157 & 175	4.2.19 and 9.2 4.2.19: Warranty: 18 (eighteen) months from the date of receipt of the material at OIL's depot. 9.2: 1 year from the date of solution	Both the clauses are not resulting to same warranty period in months. Hence we will consider 18 (eighteen) months from the date of receipt of the material at OIL's depot. Please confirm acceptance.	OIL will review and revert
280	161	4.2.25 6. OEM approval by OIL	OIL to provide list of blacklisted / holiday listed / not acceptable /banned OEM for any item of this tender.	Available in OIL's website
			If the answer against query to the clause 4.2.25 6) above is not available to bidders prior to tender bid submission, any OEM who is not in the black / holiday /not acceptable /banned listt of OIL / but having proven record in OIL and GAS industry globally including but not limited to India shall be acceptable. Please confirm	OEM approval by OIL is required prior to procurement as specified in Clause 4.2.25.
281	161	4.2.26 statutory	Please Provide copies of all the listed standards	The applicable statutory standards are identified in Clause 4.2.26. Bidders shall obtain the standards from the respective issuing bodies
282		General	For any installation activity, when the requirement arises, OIL shall provide timely shutdown, permission for hot works etc without	OIL will provide access subject to normal safety/security procedures. Work permits and shutdowns shall follow site

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			delays. If it is delayed, suitable delivery / completion schedule extension to be provided by OIL	requirements; extensions, if any, shall be governed by the contract
283	168	5.0 Breakdown requirement: 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.	This clause is effectively resulting in more than 6 years warranty. Further, the tender defined scope is AMC not Comprehensive AMC. The warranty clause of the tender as we understand is 18 months from supply to OIL depot as per clause 4.2.19 on page 157. Hence during 5 year AMC period, for the listed clauses on repair / replacement, OIL has to maintain the spares and make available of the same to the bidder. Please confirm	OIL will review and revert
284	175	9.1 Common	T0+1 Month is highly impractical considering the magnitude and complexity of the project, please accept T0+3 Months = T1	OIL will review and revert
285	175	9.2 Instrumentation in Phase 1	The proposed target time lines are highly impractical considering the actual work involved, shutdown, hotworks required, magnitude & complexity. Hence we propose the following for your kind consideration and acceptance	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
286	175	9.2 Field Survey Report	T1 + Month 3 Since amount of data to be collected is huge and number of sites geographically spread across 3 states is 290.	OIL will review and revert
287	175	9.2 Design, Detailed Engineering & Final instrument selection	T1+ Month 9. Based on the site survey data, each well instrumentation has to be designed, engineered in detail and instrument to be selected and OIL approval to be obtained	OIL will review and revert
288	175	9.2 Order Placement & Procurement for instruments and accessories	T1 + month 21. There are too many instruments having very long lead time from the date of manufacturing clearance and data sheet / drawing approval	OIL will review and revert
289	175	9.2 Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable)	T1 + month 22	OIL will review and revert
290	175	9.2 Supply at Site & Site Acceptance Testing	T1 + month 25. As there are several sites geographically spread across 3 states. We presume SAT referred here means physical inspection of supplied material as per S0R BOQ	OIL will review and revert
291	175	9.2 Fabrication/Erection/Construction/I nstall ation/ Testing / commissioning	T1 + month 43. As there are several sites geographically spread across 3 states	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
292	175	9.2 Integration of existing data and additional instrumentation tags with PDMS under DOF	T1 + month 48. As there are several sites geographically spread across 3 states	OIL will review and revert
293	175	9.2 Warranty on installed instruments and devices	We shall follow 18 months from the date of delivery to OIL Depot inline with clause 4.2.19 on page 157. Please confirm	OIL will review and revert
294		9.3 Data collection, Solution blueprint design and technical documents for software applications (Architecture, DB design, Test Plan, Role description etc.) and sign- off	T1 + Month 4	OIL will review and revert
295		9.3 User Acceptance Testing and Sign-Off	T1 + Month 20	OIL will review and revert
296		9.3 Solution Go-Live and execution of software license Agreement	T1 + Month 33	OIL will review and revert
297		9.3 User Trainings, Knowledge Transfer and Handover	T1 + Month 48.	OIL will review and revert
298		9.3 Accuracy Measurement of online simulation models after solution Go-	Ongoing for 5 years post Go-Live	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		Live & Support Services and Maintenance		
299	177	Annexure A Sensorization of 380 wells - Installations	Since each installation requires one wireless gateway as a minimum, please confirm the total number of installations under consideration for 66 wireless gauge pressure transmitters and 81 wireless temperature transmitters. This is crucial since wireless gateways are very expensive. It is practically impossible for the bidder to survey all installations within the tender dead line of one month and the actual geographical address of the plinths are not specified	OIL will review and revert
300	179	Annexure B Number of plinths	The annexure shows a total of 214 plinths, hence confirm the following	OIL will review and revert
301	179	Annexure B Wireless Gateway Quanity	i. As a minimum for each plinth one wireless gateway to be installed (assuming all the wells under one plinth is within 500meters).	OIL will review and revert
302	179	Annexure B Wireless Gateway Quanity	ii. As the number of plinths are 214, it totals to minimum 214 wireless gateways	OIL will review and revert
303	179	Annexure B Wireless Gateway Quanity	iii. The SOR BOQ on page 211 shows only 200 gateways	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
304	179	Annexure B Wireless Gateway Quanity	iv. The clause 4.2.13.8 on page 147 mentions gateways to be redundant	OIL will review and revert
305	179	Annexure B Wireless Gateway Quanity	v. Qty as per clarification sought on Annexure A above + 214 (one gateway per plinth) x 2 (for redundancy) = Minimum total number of gateways	OIL will review and revert
306	209	Part 4 SOR Item # 35	Please refer the above i to v points under annexure B clarification. If the published qty is found to be incorrect, amend the SOR BOQ item # 35 as per the calculation under abvove clarification on Annexure B point (v). If not, please confirm the SOR BOQ quantity published is correct.	OIL will review and revert
307	209	Part 4 SOR Item # 36	Each plinth is supposed to have one solar panel. As per tender there are 214 plinths. Hence please check the correctness of solar panel = 100nos mentioned in SOR BOQ and amend if found to be incorrect. If not, please confirm the SOR BOQ quantity specified is correct. It is practically impossible for the bidder to survey all 214 plinths within the tender dead line of one month	OIL will review and revert
308	211	Sl. No. 49	In the section D of Main BOQ DPT is not mentioned , please check and confirm the spare requirement.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		Spare Differential Type Transmitters: 5 Sets	Please provide the DP Range for the selection of the capsule if this spare is really required.	
309	203	2, 2 Liquidated damages	for mobilisation, please refer our request under clause 9.1. For Go live delay, We request OIL to change the term of LD to undelivered portion instead of levying on total implementation / contract charges defined under the clause	The LD provisions remain unchanged and shall apply as specified in the SLA.
310	224	C, a, 1 Payment terms, instrumentation	1. Instead of 80% against material receipt at site etc, we request it to be amended to 90%	The payment terms remain 80% on material receipt with required documents.
311	224	C, a, 2 Payment terms, instrumentation	1. Instead of 20% against go live etc, we request it to be amended to 10%	The payment terms remain 20% upon SAT/Go-Live.
312	231	Proforma A, column k: year of manufacturing	Since currently the contract is not finalized and hence schedule is not firm during bidding, year of manufacturing to be indicated will only be tentative. Please accept	The year of manufacture shall be indicated in Proforma-A as required.
313	264	Appendix III Local content	Please provide ministry notification copy. Please also confirm, during bid submission, no auditor certificate is required to be submitted from cost auditor. Self declaration by bidder in letter head is sufficient	The year of manufacture shall be indicated in Proforma-A as required.
314	1	PART 1 2.0 b	Considering exhaustive clarifications required from OIL, please provide delivery extension of 30 days from the date of providing	Bid closing extension, if any, shall be at OIL's discretion in accordance with ITB Clause 17.0.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			answers to prebid questions or tender closing date whichever is later	
315	166	5 29. Bidder needs to ensure AMC will include preventive as well as corrective maintenance of deployed solution.	How many preventive as well as corrective maintenance activity are required per year	OIL will review and revert.
316	168	5 44. 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.	1.2nd Year onward how to calculate the Materials and part price. Is it include in AMC rate as CAMC. Since only man hours are listed? Under man hours we can not include any hardware. 2.If CAMC ,Please confirm whether consumable items (e.g., batteries, fuses, protectors, cables, connectors, etc.) are also required to be replaced free of cost during the AMC period. However, the SOR BOQ has no such line item listed. Please clarify . If required, please add this line item. Otherwise we will not be considering the same. 3.In case an OEM discontinues a hardware model during the AMC period, will the bidder be allowed to provide an equivalent or upgraded replacement model? This query is subject to inclusion of this line item in SOR BOQ	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
317	210	PART-4 SECTION-IV SCHEDULE OF RATES (SOR) 17, 18,19, 20 AMC - rate card for actual consumption (enter notional annual value; will be paid on actuals) Manhour 4000	1.Kindly confirm whether the quoted scope(4000Hrs) includes all locations (Assam, AP and Rajasthan) ? Or for single location 2.Two resident engineers is for each location of Assam+AP and Rajasthan ?or one engineer for Assam+AP and one engineer for Rajasthan ?	OIL will review and revert
318	135	4.2.7.3.2 pressure measurement shall be provided for tubing head, casing head, and injection line (as applicable), with outputs via 4–20 mA / 1–5 V / Modbus (as applicable)	OIL has either not considered wireless here or we are not able to co-relate from SOR BOQ or Annexure A in page 177. Kindly clarify	OIL will review and revert
319	179	Annexure B well plinth details and qty	Exact each location wise plinth and corresponding well details / qty are required. Please povide	OIL will provide details
320	177, 209	Annexure A and SOR Pressure and temperature transmitter quantity	For all types of wells, PT/TT quantity does not match the final quantity given in the annexure, SOR. Please check and confirm the qty provided is correct	OIL will review and revert
321	98	3.4.2 Multivariable transmitter (MVT) under list of sensors planned	MVT is not listed in Annexure A or SOR BOQ. Please clarfiy and add in SOR. Otherwise we will not be considering the same	OIL will review and revert
322	103	4.1.4.1.2 Inclinometer and vibration sensor	both instruments are neither listed n Annexure A nor SOR BOQ. Please clarfiy and provide detailed	Inclinometer and vibration sensors are mandatory under the SRP field-instrumentation

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			specification if OIL decides to include in SOR BOQ. Otherwise we will not be considering the same. Please confirm	scope. They shall be included as part of the complete SRP VFD/RPC and dynamometer solution; no separate BOQ line item is specified.
323	104	4.1.4.1.4 capture every stroke data that includes key operational parameters of the SRP well (pump fillage, peak & minimum polish rod load every stroke, tubing, casing pressure, load span, Pump Intake Pressure, gearbox torque, rod stress, beam loading, polish rod HP, surface and downhole card area, motor current, kWh, surface and downhole card every stroke) locally and based on the architecture model transmit the data to centralized system over MQTT.	We don't see any sensors considered for acquiring these parameters either in description or in SOR BOQ / Annexure A. If required provide detailed specification of each and include in SOR BOQ. VFD controlling parameter is also not mentioned; need clarity on how this will be achieved	The SRP package shall include the load cell, position/inclinometer, pressure transmitters, vibration sensor, VFD/RPC and edge hardware required to capture and analyse the specified parameters. The complete solution is covered under the SRP scope and relevant BOQ items.
324	177	Annexure A 380 wells	Annexure mentions 380 wells, which contradicts the equipment quantity. Please clarify	OIL will review and revert
325	178	Annexure A Watercut meter	Please provide the selected locations for installation	The tender specifies 34 water-cut meters at emulsion-treater oil outlets. Final installation-wise list will be provided.
326	178	Annexure A wireless instruments in installations	Please provide number installations where wireless inst will be installed	OIL will provide details

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
327	178	Annexure A wireless instruments in installations	Please provide number wireless instruments per each installation to estimate gateway quantity	Well list will be provided
328	97	3.2 3.0 AS-IS STATE OF SENSORISATION ACROSS WELLHEADS:Type of Sensors	Please clarify What sensors are there and what purpose do they serve? Are they going to be only HART across ALL devices deployed? Or any other protocol? Kindly clarify.	Details will be shared during detailed engineering phase
329	Scope of Work	4.2.14 Actuated choke valve (for gas and plunger lift wells)	a) What is the line/nominal pipe size and the required valve end connection (NPT, RF flange, RTJ) and pressure class (150 / 300 / 600 / 900 / 1500 / 2500)? b)P lease provide the full flowing conditions for sizing: upstream pressure (P1), downstream pressure (P2)/differential, flowing temperature, and flow rate range (min / normal / max). c)W hat is the fluid composition, gas gravity, condensate/liquid content, CO_2/H_2S, and any sand or solids? d)W hat is the maximum working pressure (MAWP) and design temperature at the valve? e)I s the required Cv/turndown known, or should we size from the flowing conditions above plus spare trim sets? f)I s this valve for the surface choke / gas lift injection point, or is	Line size, operating temp/pressure and Max flow rate will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			it the intermittent flow-control valve on a plunger-lift well? g) What is the expected pressure drop across the valve? could ΔP exceed 50% of absolute upstream pressure? h)A ny anticipated cavitation, flashing, or hydrate/freezing concerns we should design the trim for? i)P ositioner/communication requirement, confirm Modbus (RTU/TCP?) or another protocol; any specific positioner brand/model or SCADA integration standard? j)S ignal type for position feedback and command (4–20 mA, HART, digital) k) Which fail-safe action is required per site operating philosophy, fail open, fail closed, or fail last position?	
330	Scope of Work	4.2.15 Actuated Production valves (for plunger lift wells)	a)W hat is the line/nominal valve size, end connection (NPT / RF / RTJ), and pressure class? b)U pstream pressure (P1), downstream/differential, flowing temperature, and flow rate range (min/normal/max)? c)M aximum shut-in / working pressure (MAWP) at the valve? d)G as gravity, condensate content, CO_2/H_2S, and expected sand/paraffin loading? e)C onfirm the actuator to interface directly with the plunger-lift	Line size, operating temp/pressure and Max flow rate will be provided.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			controller, or take commands from the plant SCADA/RTU?	
331	Scope of Work	4.2.16 Automated auto catcher assembly (for plunger lift wells)	Actuation Method as per tender: Typically, pneumatic or electronic actuation integrated with a plunger lift controller for automated release and catch sequencing. Please confirm only electronic actuation is required instead of either pneumatic or electronic actuation	OIL will review and revert
332	Scope of Work	Annexure-A : BOQ Plunger Lift Automation Controller	Plunger Lift Automation Controller with Remote access software is not included in the list of items in Annexure A. As an added safety and optimization feature, we recommend including (i) a plunger arrival velocity sensor (ii) motor-valve and (iii) a throttling control system for the motor valve that modulates the production valve based on the measured plunger arrival velocity, for safer remote operation.	To be finalised during detailed engineering
333	SCADA System	4.2.1.1 Indicative Data Flow Architecture: Data Flow Architecture	Request OIL to provide details (Make/Model) of existing SCADA systems.	The tender identifies existing ABB SCADA RTU systems and SCADAVANTAGE software. Additional make/model details will be provided during detailed engineering.
334	Communication	4.2 / 4.2.1 / 4.2.1.1	Request OIL to confirm have they carried out any Signal strength study/survey through	The bidder shall conduct the site-wise signal-strength/connectivity

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		Technical Requirements:4G/LTE Requirements	Airtel/BSNL/any other service provider for all 700 well sites?	assessment and provide the complete telecom solution as specified in Clauses 4.2.1.3 and 4.2.1.6.
335	Communication	4.2 / 4.2.1 / 4.2.1.1 Presently OIL is having two wireless Well Head Monitoring systems supplied by M/s Yokogawa India Ltd. (for 10 wells) and by M/s Kelton Technologies Ltd. (for 77 wells). Both are cloud-based solutions, and the basic architecture is as given below.	Request OIL to provide the details of existing Kelton System along with Architecture diagram.	Technical details of the existing RTUs/modems and systems will be shared during detailed engineering. The basic existing-system architecture is provided in Clause 4.2.1.3.
336	175 OF 307	9 PROPOSED IMPLEMENTATION PLAN: Issuance of Letter of Intent (LOI):Formal authorization to initiate the project, including confirmation of scope, commercial terms, and governance structure.	To book the contract in company's SAP and initiate mobilisation, it has to be Letter of Award (LOA). Against LOI it is not possible. Please confirm and change to LOA. T0 should be referred to LOA/PO date.	LOA will be issued
337	177 of 307	Annexure-A (Sensorization of 380 Wells) Note:Note: The quantity of instruments provided in the above list is tentative and may change. Bidders will have to	In the event of any quantity increase from the base quantity mentioned in Annexure-A, we request OIL to consider suitable Addition rate in line with Price BOQ.	Revised Annexure A will be published.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		visit OIL sites before price bid to assess the availability of instruments in field and the subsequent instrumentation requirement in order to achieve autonomous optimization as per their software. For crude oil application please consider Remote Seal type pressure transmitter.		
338	01 of 307	Original Bid Closing Date & Time 6th October 2026 [11:00Hrs (IST)]	Considering the volume of the project and efforts required to prepare proper estimation we need additional time for submission of the bid. In view of this we request OIL to consider 4 weeks time from the date of Pre-bid reply and last corrigendum for submission of bid.	BCD will be extended suitably at OIL's discretion
339	89 of 307	42.6 Exclusions Any claim, difference or dispute relating to, connected with or arising out of OIL's decision to initiate any proceedings for suspension or debarment or banning, or decision to suspend or to ban or to debar business dealings with the bidder/CONTRACTOR and/or with any other person involved or	Prior intimation of not less than 30 days, period of suspension, consequences of suspension, cost associated with suspension (cost of storage, calibration, retesting, etc.), LD not to be levied in such case	To be guided by tender terms

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		connected or dealing with bid/contract/bidder/CONTRACTOR.		
340	184 of 307	16.Obligations of Bidder The bidder shall bear all expenses on account of repair/replacement of all their materials, equipment etc.consequent upon any damage/loss/non-performance during services implementation.	We presume that Repair and replacement are to be considered only for manufacturing defects. Also, repair /replacement dependant on INCOTERMS, i.e. upto point of delivery and scope of work. Kindly confirm.	OIL will review and revert
341	155 of 307	4.2.20 Factory Acceptance Test (FAT) The successful bidder shall intimate OIL at-least 60 days prior for FAT at overseas location and 30 days prior for FAT at domestic location to OIL for deputing OIL's personnel. Cost of travel, accommodation etc., of OIL's inspection team will be borne by OIL.	Postponing FAT or others tests due to reasons not attributable to bidder-: OIL to inform what is the maximum duration of such postponement (if any) and number of times such postponement can happen, cost associated, LD not to be levied in such cases, formal document to be issued, if not formal document, then it will be deemed by Yokogawa that postponement is at the instance of OIL. Kindly clarify.	Any delay from OIL's side will be excluded from Penalty/LD.
342	72 of 307	20.0 INDEMNITY AGREEMENT:	12.I indemnity- a. Yokogawa's indemnity: i. Breach of any law, confidentiality obligations ii. Loss of life and personal injury to personnel for acts or omissions directly and solely attributable to	No change in GCC provision

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			Yokogawa iii. Gross negligence iv. Wilful misconduct v. I P indemnity to the extent of using commercially reasonable efforts to procure any licenses or approvals to ensure continued use of the product is the only indemnification obligation, and this will the sole remedy for OIL with respect to IP indemnity. b. PIL's indemnity: i. Breach of any law, confidentiality obligations ii. Loss of life and personal injury to personnel for acts or omissions directly and solely attributable to Yokogawa iii. Gross negligence iv. Wilful misconduct	
343	149 of 307	4.2.13.11 Dynamometer for SRP pumps Data Acquisition: Continuous or periodic load/position data capture integrated with SCADA/monitoring systems.	Kindly clarify how often / what period the data acquisition should be considered.	Dynamometer data acquisition shall be continuous while SRP is under operation.
344	104 of 307	4.1.4.1.3 Edge IoT features In the enterprise optimization platform, the solution shall	Request OIL to clarify this requirement. What parameters, how often..	The platform shall rank wells using production-uplift opportunity, energy-saving potential, maintenance

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		automatically group and rank wells by production uplift opportunity, energy savings potential, maintenance priority, and risk-based intervention needs.		priority and intervention risk. Detailed scoring parameters and refresh frequency shall be configured during implementation.
345	92 of 307	45.0 TO DETERMINE THE CONTRACT: 46.0 WITHOUT DETERMINING THE CONTRACT: In such an event (i.e. termination under Article No. 44.4 to 44.9 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 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	We request OIL to consider Risk cost as below. Risk purchase must be only to the extent of the difference amount and not the overall cost.	No change in GCC provision

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		for any excess cost occasioned by such work having to be so taken over and completed by the COMPANY over and above the cost at the rate/cost specified in the schedule of quantities and rates/prices. In such an event (i.e. termination under Article No. 44.4 to 44.9 above), the COMPANY may take over the work of the CONTRACTOR or any part thereof and complete the same 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 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		
346	66 of 307	14.0 INSURANCE: The Contractor shall at its own expense arrange secure and maintain	We request OIL to consider as below: Workman compensation will be project specific. Please note OIL will not be made beneficiary of the claim.	To be guided by tender terms

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		insurance with reputed insurance companies to the satisfaction of the Company as follows: 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. b) The Contractor shall also carry adequate insurance cover against damage/loss to third party/person/property		
347	89 of 307	44.9 Notwithstanding any provisions herein to the contrary, the Contract may be terminated at any time by the COMPANY on giving 30 (thirty) days written notice to the CONTRACTOR due to any other reason not covered	prior intimation of atleast 90 days. Payments have to be made upto the date of cancellation and for all cost incurred by Yokogawa until date of cancellation. LD not to be levied in such case	No change in the GCC provision

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		under the above Article from 44.1 to 44.8 and in the event of such termination the COMPANY shall not be liable to pay any cost or damage to the CONTRACTOR except for payment of services as per the Contract upto the date of termination.		
348	203 of 307	SCC B 4.0,	Please note that AI Model accuracy is largely based on the availability of past Data. Oil India to suggest how much past data will be available for AI model building. Request per-use-case accuracy metric definitions (VFM, well integrity, wax and hydrate prediction, lift optimisation each require distinct measures), the OIL-approved reference dataset and measurement method, exclusion of error attributable to documented data-quality issues or OIL-provided infrastructure, an overall cap on cumulative accuracy penalties, and re-basing of the penalty from 'Implementation Charges' (Sections A+B+D+E+G+H) to the software portion of the contract.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
349	104,99, 124,209,21 1of 307	SOW 4.1.4 / 4.1.1 / 4.2.1.5 /4.2.1.3 Note 3 of BOQ	The Bidder proposes an on-premise deployment of the DOF application within OIL's OT zone at Purdue Level 3, consistent with SOW clause 4.1.4 (on-prem private cloud using lightweight event-driven architecture with MQTT) and the on-premise OT Data Lake described at clause 4.1.1, with the analytics and presentation tier deployed above the Level 3.5 DMZ. Please confirm (a) that this architecture is acceptable; (b) which BOQ line carries the server, storage and network infrastructure for the on-premise DOF application, given that Section D lists only the two SCADA servers and two Local Engineering Workstations; and (c) whether OIL will provide rack space, power, cooling and physical security at FHQ Duliajan.	OIL will review and revert
350	167,.207 of 307	SCC 8.0(a) pvs SOW AMC items 37-38	As per the standard practice VAPT is done once a year, we recommend once a year VPAT for this SOW also, kindly confirm.	VAPT shall be conducted once prior to Go-Live and at least annually during the contractual period under SCC Clause 8.0.
351	137 / 138 / 203 of 307	SCC B 4.0 vs SOW 4.2.8 4.2.9 p.138, 4.2.10	Section 4.2.10 sets VFM acceptance at oil and water MAPE <=10-15% and gas MAPE <=15-20%, i.e. 80-90% accuracy. Section 4.2.8 sets	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			ESP gas-lock early warning at precision >=80% and recall >=80%. Section 4.2.9 sets barrier-state classification at >=90% against SME review. Each of these falls inside or below the penalty bands of SCC B 4.0, which levies 5% of Implementation Charges below 95%, 10% below 90%, and declares below 85% 'not acceptable'. Please confirm that the module-specific acceptance criteria in the Scope of Work prevail over the general accuracy provision, and request that equivalent per-module criteria be issued for SRP, plunger-lift, gas-lift and IPSM, which presently state no numerical target.	
352	162 of 307	SOW 4.2.26 Note 3,	Clause 4.2.26 Note 3 limits AI model retraining to a maximum of four cycles per year during the AMC period, while the same clause requires that 'incase of Drift, model retraining to be done accordingly to retain the accuracy level of 95%', and SCC B 2.0 requires retraining, validation and redeployment within ten business days of every confirmed drift event with drift evaluated at least every 24 hours. Please confirm whether the four-	Four retraining cycles per year are the stated AMC planning limit; confirmed model drift shall be addressed as required to retain approved accuracy.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			cycle limit is a ceiling on the Bidder's obligation or a planning assumption, and how retraining cycles triggered by confirmed drift are counted against it.	
353	161 /199/185 of 307	SOW 4.2.26 Note 2 SCC 20.0, SCC B 1.0	Clause 20.0 requires that all traffic initiated towards the proposed public cloud be routed through OIL's existing secure cloud landing zone in MS Azure, and that SSO be established using OIL's Azure AD. Please confirm that unavailability, degradation, scheduled maintenance or configuration change of OIL's Azure landing zone, OIL's Azure AD tenant, or the IPsec path between them is excluded from the computation of the Bidder's availability and latency service levels, where the Bidder provides timestamped monitoring evidence.	Any delay from OIL side will be excluded from Penalty/LD.
354	125/161	SOW 4.2.26 Note 2 SOW 4.2.1.7(A)	Clause 20.0 requires that any data transmission cost from the offered public cloud to OIL's landing zone be factored by the Bidder in its offer. Please advise which Azure region hosts OIL's existing landing zone, so that the Bidder may place its subscription in the same region. The difference between intra-region	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			peering and inter-region transfer is material to both the quoted price and the end-to-end response time benchmark at clause 4.2.1.7(A).	
355	PART-3,BID EVALUATION CRITERIA (BEC)	TECHNICAL EVALUATION CRITERIA: 2.1 EXPERIENCE CRITERIA: Bidders should meet all the following experience criteria: (A) The bidder must have successfully executed/completed 'Similar Works' in Oil & Gas sector during the last 7 (seven) years reckoned from the Original Bid Closing Date, as under: (a) One (01) similar work having executed value not less than INR 186,02,86,000.00 OR (b) Two (02) similar works each having executed value not less than INR 116,26,79,000.00 OR (c) Three (03) similar works each having executed value not less than INR 93,01,43,000.00. Notes: (i) 'Similar Works' shall mean Implementation of Integrated Digital Oil Field (DOF)/ Integrated Production Operations	Request OIL to consider changes in Technical Evaluation Criteria as Highlighted below. (A) The bidder must have successfully executed/completed 'Similar Works' in Oil & Gas sector during the last 7 (seven) years reckoned from the Original Bid Closing Date, as under: (a) One (01) similar work having executed value not less than INR 186,02,86,000.00 OR (b) Two (02) similar works each having executed value not less than INR 116,26,79,000.00 OR (c) Three (03) similar works each having executed value not less than INR 93,01,43,000.00 Notes: The Integrated DOF/ IPO / Intelligent Field / Production Surveillance and Optimisation solution mentioned above shall	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		(IPO)/ Intelligent Field / Production Surveillance and Optimisation solution, for upstream Oil & Gas assets in India or Abroad. The Integrated DOF/ IPO / Intelligent Field / Production Surveillance and Optimisation solution mentioned above shall mandatorily include - Notes: (i) 'Similar Works' shall mean Implementation of Integrated Digital Oil Field (DOF)/ Integrated Production Operations (IPO)/ Intelligent Field / Production Surveillance and Optimisation solution, for upstream Oil & Gas assets in India or Abroad. The Integrated DOF/ IPO / Intelligent Field / Production Surveillance and Optimisation solution mentioned above shall mandatorily include - 1.Production Data Management System (PDMS) 2.Remote Wireless Well Head Monitoring and Control (including Integration /augmentation of existing) 3.Integrated Production System Modelling (IPSM), consisting-	mandatorily include from same contract/Work Orders/Service Orders or from several contract/Work Orders/Service Orders/Purchase Orders from different projects. 1. Production Data Management System (PDMS) Or 2.R emote Wireless Well Head Monitoring and Control (including Integration /augmentation of existing) Or 3. Integrated Production System Modelling (IPSM), consisting of at least 01 (One) of the following areas- (a) Material Balance Reservoir Modelling (b) Well Performance Model (c) Surface Network Modelling & Optimization (d) Wax & Hydrate Deposition/Prediction Modelling Additionally, The Integrated DOF/ IPO / Intelligent Field / Production Surveillance and Optimisation solution mentioned above must also cover at least 01 (One) of the following areas: 1. SRP or Plunger Lift Optimization	

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		(a) Material Balance Reservoir Modelling (b) Well Performance Model (c)Surface Network Modelling & Optimization (d)Wax & Hydrate Deposition/Prediction Modelling	Or 2. Gas lift Optimization	
356	PART-3,BID EVALUATION CRITERIA (BEC)	2.1.1 In support of the experience criteria under Clause No. 2.1 above, the bidder shall furnish the following documentary evidence: (a) Contract document/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) 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.	Request OIL to consider changes in Technical Evaluation Criteria as Highlighted below. In support of the experience criteria under Clause No. 2.1 above, the bidder shall furnish the following documentary evidence: (a) Contract documents/Work Orders/Service Orders separate work orders showing detailed scope of work AND (b) Job Completion Certificate (JCC) or Service Entry Sheet (SES) or Certificate of Payment (COP) issued by the Client and supported by Client's certified Or Job Report showing the following: signed by CEO/MD/Country Head Gross value of job done Work Order No./Contract No., Nature/Number/Description of jobs done, and	OIL will review and revert

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			Contract period and date of completion. (iv) Work executed by a bidder for its own organization/parent subsidiary/co-subsidiary/sister-subsidiary/Joint Venture cannot be considered as experience for the purpose of meeting BEC. Clarification: If Yokogawa, India will bid the project, kindly confirm that the work executed by Yokogawa Middle East for Middle East customers can be considered as experience. (v) Work executed through 'sub-contracting' shall not be considered for evaluation. Clarification: Please confirm that this clause will not apply for orders received from EPC to Yokogawa. Example, End-user awards PO to EPC and EPC awards PO to Yokogawa.	
357	Tender SOW – Technical Specifications	4.2.1.3 Supply of min. 2 nos. SCADA rack servers	Given the mandated 99.95% solution uptime SLA (SLA Item 5, Pg 199), kindly confirm the intended high-availability architecture for the 2 nos. SCADA rack servers — Active-Active HA cluster, Active-Passive (primary + hot standby), or one server dedicated to SCADA and	Oil will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			the other to Historian/other function — and whether this configuration alone is adequate to meet 99.95% uptime or additional redundant servers/DR are expected.	
358	Tender SOW – Technical Specifications	4.2.1.3 SCADA server BOQ gap	The narrative requires supply of 2 nos. rack servers, SCADAVANTAGE software and license, but no corresponding BOQ line item exists (Sections A-I, Pg 208-212). Kindly confirm under which BOQ item this cost is to be quoted, or issue an additional BOQ line item.	Oil will review and revert.
359	Tender SOW – Technical Specifications	4.2.1.3 Windows Server 2022 OS licensing	Please confirm whether the Windows Server 2022 OS license (and associated CALs) for the SCADA rack servers is to be procured/quoted by the bidder or provided by OIL, and clarify OS patch-management/security-update responsibility during warranty and AMC.	Oil will review and revert.
360	Tender SOW – Technical Specifications	4.2.1.3 SCADAVANTAGE (ABB) software licensing	SCADAVANTAGE appears to be ABB's proprietary SCADA platform. Please confirm (a) whether the license can only be procured through ABB/its authorized channel, (b) the exact version/edition compatible with the existing ABB RTU firmware, and	Oil will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			(c) whether OIL will facilitate bidder's coordination with ABB for procurement.	
361	Tender SOW – Technical Specifications	4.2.1.3 – Messaging, APIs & Integration OPC UA availability on existing SCADA	Please confirm whether OIL's existing SCADA (ABB SCADAVANTAGE) already has a licensed and configured OPC UA server/interface, or whether the bidder must supply, license and configure a separate OPC UA server/gateway on top of the existing SCADA.	OIL will review and revert
362	Tender SOW – Technical Specifications	4.2.1.3 OPC UA Server vs. Client responsibility; sessions/tags	Kindly clarify whether the bidder is only required to build an OPC UA Client against an existing OPC UA Server on the SCADA, or must supply the Server/Gateway itself, and indicate the expected number of concurrent OPC UA sessions/subscriptions and total tag/point count for correct sizing.	OIL will review and revert
363	Tender SOW – Technical Specifications	4.2.1.3 Legacy OPC DA/HDA vs. OPC UA	Since the existing SCADA is an older ABB environment, kindly confirm whether it natively exposes OPC UA, or only legacy OPC DA/HDA (classic, COM/DCOM-based). If legacy OPC is involved, confirm whether an OPC DA-to-UA tunneller/gateway is within bidder's scope.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
364	Tender SOW – Technical Specifications	4.1.1 / general Data Historian – scope, ownership & specification	"Historian" is referenced repeatedly (Pg 100, 110, 127, 129, 131, 137, 139, 174) as a data source/integration point but no standalone specification, sizing, tag capacity or retention requirement is defined anywhere. Kindly confirm whether an existing OIL/ABB Historian already exists for bidder integration, or a new Historian must be designed, supplied, licensed and sized by the bidder, and issue the corresponding specification/BOQ item if the latter.	OIL will review and revert
365	Tender SOW – Technical Specifications	4.2.2 / 4.2.1.7 Historian tag capacity, retention & licensing model	If the Historian is to be newly supplied, kindly confirm the required tag capacity (with the mandated 20% spare per Cl. 4.2.1.3), online vs. archive retention period, data-compression requirements, and whether licensing should be per-tag or an unlimited-tag enterprise license.	OIL will review and revert
366	Tender SOW – Technical Specifications	4.2.4 – Remote Well Head Monitoring and Control Time-series database technology (PI/AF, InfluxDB, TimescaleDB)	Clause 4.2.4 lists OSIsoft PI/AF, Influx DB or Time scale DB as example time-series database options. Kindly confirm whether the bidder is free to select any of these (or an	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			equivalent), or whether OIL mandates/prefers a specific platform for compatibility with existing systems.	
367	Tender SOW – Technical Specifications	4.2.4 Dashboard platform (Grafana/Power BI)	Clause 4.2.4 references Grafana/Power BI for dashboards. Kindly confirm whether OIL already holds enterprise licenses for either platform that the bidder can leverage, or whether the bidder must independently procure and quote for dashboarding software licenses.	Licenses for Dashboarding and all will be in Bidder's scope
368	Tender SOW – Technical Specifications	4.2.4 Map visualization platform (ArcGIS/Mapbox/Leaflet)	Please confirm licensing/subscription responsibility for the map-based visualization platform (ArcGIS/Mapbox/Leaflet or equivalent) referenced for asset/well geospatial views, and confirm if OIL has an existing GIS platform/enterprise agreement the solution should integrate with.	No existing visualisation solution available.
369	Tender SOW – Technical Specifications	4.2.4 Alarm management standard (ISA-18.2/IEC 62682)	Kindly confirm whether OIL has an existing Alarm Management/Alarm Philosophy document (per ISA-18.2/IEC 62682) that the bidder's alarm rationalization, severity classes, and shelving/suppression	To be finalised during detailed engineering

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			logic must align with, and share it if available.	
370	Tender SOW / BOQ	10.0 – Number of Concurrent Users; BOQ Item 14 Discrepancy: 180 concurrent users vs. 150 web-application users	Section 10.0 (Pg 176) and Clause 4.2.1.7-A (Pg 125) specify 180 concurrent authenticated users (50 viewers + 120 operators + 10 administrators), whereas BOQ Item 14 (Pg 209) states "Web based application for DOF platform – Users – 150." Kindly reconcile this discrepancy and confirm the exact number and category-wise split of licenses to be quoted.	OIL will review and revert.
371	Tender SOW / BOQ	BOQ Item 14 License type – concurrent vs. named user	Please clarify whether the required user licenses are to be "concurrent" (shared pool up to the cap) or "named-user" (dedicated per individual) licenses, since this materially affects licensing cost.	OIL will review and revert.
372	Tender SOW / BOQ	BOQ Item 14; AMC Cl. 19 Scalability of user licenses during 5-year AMC	AMC Terms (Pg 165, Sl. No. 19) refer to "License configuration (increase or decrease of users)" as a bidder support activity. Kindly confirm whether the license count is fixed for the full 5-year contract or whether OIL anticipates growth, and if so, whether incremental per-user license pricing should be quoted as a separate unit rate.	OIL will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
373	Tender SOW – Technical Specifications	4.2.24 (AMC O&M, item 7) – SCADA Master Control Room EWS/HMI/MMI in SCADA master control room – new vs. existing	Kindly clarify whether the Engineering Workstations (EWS), HMIs and MMIs referenced for maintenance in the SCADA master control room are new equipment to be supplied by the bidder (with quantity/specification and a corresponding BOQ line), or existing OIL/ABB equipment for which the bidder only provides software-level AMC support.	OIL will review and revert
374	Tender SOW – Technical Specifications / BOQ	4.2.18; BOQ Item 37 Local Engineering Workstation (LEW) coverage limited to Makum & Hapjan	BOQ Item 37 provisions only 2 nos. LEWs, restricted to OCS Makum and Hapjan (Cl. 4.2.18). Several other installations (Shalmari, Moran, Kathaloni, Dikom, Langkashi, Barekuri QPS, Habeda, etc.) also fall within scope. Kindly confirm whether local engineering workstation/SCADA client access is required only at Makum & Hapjan, or elsewhere too, and revise the BOQ quantity accordingly if so.	Two Local Engineering Workstations are required for OCS Makum and Hapjan only, as specified in Clause 4.2.18 and BOQ Item 37. All necessary connection/integration shall be made by bidder.
375	Tender SOW – Technical Specifications	Payment Milestone 2 (Requirement Finalization) DEV / SIT / UAT environment infrastructure	Milestone 2 (Pg 225) requires "Configuration of core platform components and environments (DEV / SIT / UAT)" as a deliverable, implying three parallel non-	DEV/SIT/UAT environments are required as part of platform configuration. The bidder shall include the necessary

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			production SCADA/DOF environments in addition to the production system. Kindly confirm whether separate SCADA server hardware/licenses are required for DEV/SIT/UAT (i.e., additional item counts beyond the production tier), or whether these environments may be lower-capacity/virtualized instances, and clarify if this infrastructure is to be quoted as a distinct BOQ line item.	infrastructure/licences in its proposed architecture; no separate BOQ item is specified.
376	GCC / Tender SOW	Cl. 5.0 – Inspection Source-code / configuration-repository audit access for the SCADA platform	Clause 5.0 grants OIL the right to "inspect, audit and review... source code repositories, configuration files and deployment scripts." For a SCADA platform built on a proprietary/OEM engine, the underlying platform source code is not owned by the bidder and cannot be shared. Kindly confirm whether this audit right is intended to apply only to bidder-developed configuration, graphics, tag databases, calculation logic and deployment scripts (which are inspectable), and not to the underlying commercial SCADA product's proprietary source code.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
377	Tender SOW – De-mobilization	Cl. 11.0 – De-mobilization Handover of SCADA configuration, tag database and graphics at contract exit	Clause 11.0 requires handover of "source code and repositories, configuration files and deployment scripts" and states "no data, models or artefacts shall be retained by the Bidder post exit." Kindly confirm this is understood to cover the complete SCADA tag database, graphics/mimics, alarm configuration, historian configuration and engineering database in a vendor-neutral or OEM-standard export format, so that OIL is not left dependent on the exiting bidder or the specific SCADA OEM for future support.	The complete SCADA configuration, tag database, graphics, alarms, historian configuration and engineering artefacts required for continuity shall be handed over under the documentation and demobilization provisions.
378	GCC / Tender SOW	AMC Cl. 40-42 (Pg 167-168) OIL's ICT Data Backup Policy — SCADA/Historian-specific backup frequency (RPO)	Clause 42 (Pg 167-168) requires the bidder to align backup frequency (full/incremental) for "Files & Images" and "Databases and log files" with OIL's ICT Data Backup Policy, referenced but not attached. Kindly share this policy document, or at minimum confirm the required backup frequency / Recovery Point Objective (RPO) specifically for the SCADA real-time database, historian, and tag/alarm configuration, since these have very different backup-window and	Backup frequency and retention shall be finalized with OIL in accordance with OIL's ICT Data Backup Policy. The tender does not state numeric RPO values.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			storage-sizing implications than static files.	
379	GCC / Tender SOW	Cl. — Cybersecurity / O&M requirements Endpoint Protection Policy — compatibility with SCADA/OT nodes	The SOW requires the bidder's solution to comply with OIL's "Endpoint protection policy." Since endpoint protection (anti-virus/whitelisting) agents on SCADA servers, RTU/edge gateways and HMI nodes must be OEM-qualified to avoid interfering with real-time control functions, kindly share OIL's Endpoint Protection Policy (or the specific endpoint-security product mandated) so the bidder can confirm compatibility with the proposed SCADA platform's own qualified endpoint-security offering.	The solution shall comply with OIL's Endpoint Protection Policy. Product/details are not specified in the tender and shall be finalized during cybersecurity onboarding.
380	GCC / Tender SOW	Cl. — Patch Management Policy SCADA-specific patch validation/testing process before deployment	The SOW requires compliance with OIL's Patch Management Policy for the solution generally. Given that OS/security patches on a live SCADA system must first be validated in a test/staging environment to avoid disrupting real-time control and communication functions, kindly confirm whether OIL's Patch Management Policy allows for a bidder-managed patch validation cycle (using the	Patch management shall comply with OIL policy. Updates requiring downtime need prior approval and rollback capability; no specific maximum deployment window is stated.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			DEV/SIT/UAT environment referenced above) before patches are applied to the production SCADA servers, and specify the maximum patch-deployment SLA window.	
381	Tender SOW – Technical Specifications	Cl. 4.2.20(5); Cl. 4.2.24(1a) HMI graphics/mimic standard for SCADA displays	Cl. 4.2.20(5) requires "workflow and graphics checking of DOF Platform dashboard" as part of FAT, and Cl. 4.2.24 requires ongoing graphics maintenance. Kindly confirm whether OIL mandates a specific HMI graphics/mimic standard (e.g., ISA-101 high-performance HMI, or OIL's own existing symbol library/colour philosophy from the existing ABB SCADAVANTAGE system) that the new SCADA graphics must conform to, or whether the bidder's own standard graphics library is acceptable.	The tender does not mandate a specific HMI graphics standard. Graphics shall be checked during FAT and configured to OIL requirements during implementation.
382	Tender SOW – Technical Specifications	Cl. 4.2.1.3; Cl. 4.2.24 (SCADA Master Control Room) Control-room HMI/console hardware (video wall, multi-monitor operator consoles)	The SOW references a "SCADA master control room" (Cl. 4.2.24, Pg 159) but does not specify operator-console hardware. Kindly confirm whether the bidder is required to supply operator console hardware (multi-monitor workstations, video wall, console furniture) for the SCADA master control room, or whether OIL's existing control-room	No new video wall, console furniture or additional operator-console hardware is specified. Bidder supply is limited to the hardware expressly stated in the tender.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			hardware (used with the existing ABB SCADAVANTAGE system) will be reused, with the new SCADA HMI simply displayed on it.	
383	GCC / Tender SOW	AMC Cl. 19 (Pg 165) SCADA/DOF software license compliance audit and true-up process	AMC Clause 19 references "License configuration (increase or decrease of users)" as an ongoing bidder support activity. Kindly confirm the process by which OIL (or a third-party license auditor) may verify SCADA/DOF software license compliance (user counts, tag/item counts, module entitlements) during the 5-year AMC period, and clarify the mechanism and timeline for "true-up" licensing if actual usage exceeds the originally quoted entitlement.	Licence management and configuration are included in AMC. Detailed audit/true-up procedures are not specified and shall be agreed during implementation.
384	Tender SOW – Technical Specifications	Cl. 4.2.1.2 – Data Model Tag/point naming convention standard for the SCADA database	Cl. 4.2.1.2 requires tags to conform to "a canonical schema." Beyond the canonical schema query already raised, kindly confirm specifically whether OIL's existing ABB SCADAVANTAGE system already follows a documented tag-naming convention (e.g., area-equipment-measurement based) that the new SCADA tag database must remain consistent with, to avoid a mismatch between legacy and new	A canonical schema is mandatory. Detailed tag naming convention shall be finalized during detailed engineering in alignment with existing SCADA and OIL requirements.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			tags during the integration described at Cl. 4.2.1.3.	
385	Tender SOW – Technical Specifications	Cl. 4.2.1.3 UPS/backup-power autonomy for the central SCADA servers	The SOW specifies UPS-backed power for field-mounted panels and Local Engineering Workstations (Cl. 4.2.6.2, 4.2.18) but does not state the required UPS autonomy (backup runtime) for the central SCADA server pair at the SCADA master control room. Given the 99.95% Solution Uptime SLA, kindly specify the minimum UPS autonomy (e.g., 30/60 minutes) and whether a backup diesel generator is already available at the control-room location, or must be supplied by the bidder.	The tender does not specify central SCADA-server UPS autonomy or generator requirements. The bidder shall propose infrastructure required to meet the availability SLA.
386	Tender SOW – Technical Specifications	Cl. 4.2.1.1 – Indicative Data Flow Architecture SCADA network IP addressing scheme and VLAN segmentation	Kindly confirm whether OIL has an existing IP addressing scheme / VLAN segmentation standard for its OT network (which the new SCADA servers, RTU/edge devices and OT Data Lake interfaces must be allocated addresses within), or whether the bidder is to propose its own addressing scheme for OIL's approval during detailed engineering.	OIL will provide
387	SLA Annexure	SLA Item 5 — Uptime; general Disaster Recovery site for the SCADA	Beyond the local Active/Hot-Standby redundancy already queried elsewhere in this Section,	DR is not required. Backup on cloud will be OIL's responsibility. Retention/type

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		platform (separate from local HA/redundancy)	kindly confirm whether OIL requires a geographically separate Disaster Recovery (DR) instance of the central SCADA server/historian (e.g., at a different Field Headquarters or on cloud), or whether the local 2-server HA pair is considered sufficient to meet the 99.95% Solution Uptime SLA without a separate DR site.	of backup required etc will be discussed during the detailed engineering exercise.
388	SLA Annexure	SLA Item 5 Numeric failover time / RTO for the SCADA server pair	The SOW does not specify a maximum acceptable failover time (Recovery Time Objective) for the central SCADA server pair switching from Active to Standby on failure. Kindly confirm the maximum acceptable failover time (e.g., "within 1 second," "within 5 minutes") OIL expects, since this determines whether a fault-tolerant/zero-data-loss redundancy architecture (costlier) or a standard Active-Standby HAC architecture is required to meet the SLA.	Will be decided during detailed engineering
389	Tender SOW – Technical Specifications	Cl. 4.2.1.1 (general — HMI/dashboard requirements) Multi-language support requirement for SCADA/DOF HMI	Kindly confirm whether the SCADA/DOF platform's operator HMI, alarms, and reports are required to support any language other than English (e.g., Hindi or a regional language), given the operator	The tender requires English documentation and does not specify multilingual HMI support.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			workforce includes field-level personnel at remote installations across Assam, Rajasthan and Arunachal Pradesh.	
390	Tender SOW – Technical Specifications	Cl. 4.2.4 — Alarm management Alarm notification recipient list and escalation matrix (email/SMS)	The SCADA alarm system is required to support notification via email/SMS/pager per standard functionality. Kindly confirm whether OIL will provide the recipient list and escalation matrix (who is notified for which alarm priority/area, and escalation timing) during detailed engineering, or whether the bidder must propose this as part of the alarm rationalization exercise, and specify if SMS-gateway/email-server infrastructure will be provided by OIL or must be procured by the bidder.	Alarm recipients, priorities and escalation policies shall be finalized with OIL during implementation. SMS/e-mail notification capability and required supporting components are in bidder scope.
391	GCC / Tender SOW	AMC O&M item 39 (Pg 167) Session/access/process/design-platform log retention period	AMC O&M item 39 (Pg 167) requires the solution to create session logs, access logs, process logs and design-platform logs of all user/system activities. Kindly specify the minimum required retention period for these logs (e.g., for CERT-In/regulatory compliance purposes) so that bidders can size log storage and archival infrastructure accordingly.	The tender does not specify a numeric log-retention period. The bidder shall propose retention aligned with OIL security policies and sizing requirements.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
392	GCC / Tender SOW	General — Exit/Vendor Lock-in SCADA platform vendor lock-in and long-term support risk	Given the SCADA platform proposed will be a proprietary OEM product (whether continuing with the existing ABB SCADAVANTAGE or a new platform), kindly confirm whether OIL requires the bidder to demonstrate a minimum guaranteed OEM product-support/roadmap horizon (e.g., 10+ years) and clarify OIL's expectations regarding portability of the tag database/graphics/logic to an alternative SCADA platform at a future re-tender, to help OIL assess long-term vendor lock-in risk at the evaluation stage.	No minimum OEM support-roadmap horizon is specified. Exit-management, documentation and artefact handover requirements shall apply to mitigate vendor dependency.
393	Tender SOW – Technical Specifications	4.1.1 – Instrumentation Existing ABB RTU make/model/protocol	Bidders must terminate all field wiring up to the existing ABB RTU panel and provide marshalling panels where necessary. Kindly share the make, model, firmware version, available spare I/O (channel-wise), communication protocol (Modbus/DNP3/OPC, etc.) and panel GA drawings of the existing ABB RTU panels at each installation.	OIL will review and revert
394	Tender SOW – Technical	4.2.1.3 – Note 1	Since RTU compatibility is a major cost/technical driver, kindly share at least indicative	The tender provides that existing RTU technical details will be shared during detailed

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications	"Technical details of existing RTU to be shared during detail engineering"	make/model/protocol details of existing RTUs at pre-bid stage (or arrange a mandatory site visit) rather than deferring to post-award detailed engineering.	engineering and requires bidders to visit the sites to assess actual requirements.
395	Tender SOW – Technical Specifications	5.0 – AMC Terms, Sl. No. 6 AMC troubleshooting liability for existing (non-bidder-supplied) RTU	Clause 5.0 (Sl. No. 6) makes the bidder responsible for troubleshooting RTU issues during AMC. Since the existing ABB RTU hardware is neither supplied nor owned by the bidder, kindly clarify whether this obligation is limited to newly supplied RTU/edge devices only, and whether OEM support/spares access will be facilitated by OIL for the existing units.	OIL will review and revert
396	Tender SOW – Technical Specifications / BOQ	BOQ Item 23 RTU I/O expansion for gas-lift flow measurement package	Please confirm whether the "RTU/SCADA integration" cost coverage for the 48 gas-lift flow measurement sets includes supply of additional RTU I/O cards/expansion modules where the existing RTU has no spare I/O capacity, or whether this is to be quoted as a separate BOQ item.	The DOF EDGE Autonomous Gas Lift Optimization System shall continuously validate and update its gas-lift optimization results based on actual field measurements, including well production rates, gas injection rates, pressures and other relevant operating parameters acquired from MPFM, Test Separator, SCADA, VFM and

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				other available measurement systems, as applicable. The validated results shall be used to dynamically determine and implement optimum gas-lift operating setpoints, including the optimum gas injection rate/GLPC for continuous gas lift and optimum injection cycle parameters/OCT for intermittent gas lift, thereby enabling closed-loop autonomous optimization of well performance. Flow Computer for injection gas measurement is an integral part of the adaptive EDGE autonomous system.
397	Tender SOW – Technical Specifications	4.2.6.1 – Plunger Lift Architecture IEC 61131-3 deterministic control unit – open platform vs. prescribed	Clause 4.2.6.1 requires a deterministic industrial control unit (IEC 61131-3 capable) plus a separate industrial edge compute unit. Kindly confirm whether bidders are free to select any compliant PLC/controller platform, or whether OIL requires alignment with a specific brand for standardization/spares commonality across installations.	The scope covers complete monitoring, control and optimization of all 75 plunger-lift wells, including the 41 upcoming wells. It is not limited to equipment supply. The bidder shall provide an EDGE-driven autonomous Plunger Lift control system capable of converting existing conventional/timer-based Plunger Lift installations into a closed-loop, measurement-

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				driven autonomous control system. The system shall acquire real-time wellhead pressure, casing pressure, flowline pressure, production-rate and plunger-status data, as applicable, and shall autonomously determine and optimize plunger cycle parameters including shut-in time, opening time, plunger arrival, afterflow duration and cycle frequency. The EDGE controller shall continuously evaluate actual well response following each control action and shall adapt subsequent PL cycles based on real-time operating and production data. For PAGL wells, the system shall additionally support coordinated optimization of plunger-lift and gas-lift parameters. The system shall support closed-loop autonomous operation without requiring manual intervention for routine cycle optimization, while retaining operator supervisory control, configurable operating limits,

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				manual override and fail-safe fallback modes.
398	Tender SOW – Technical Specifications	4.2.6.1 Redundancy "as required by site criticality" – criteria undefined	Clause 4.2.6.1 states the RTU/edge platform "shall support redundancy options (as required by site criticality)" for CPU, power, comms and I/O, with sub-50ms failover "where redundancy is implemented." Kindly define the criticality tiers/site classification criteria (or provide a site-wise list) so bidders can accurately scope and price redundant hardware.	RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites. Clause will be modified.
399	Tender SOW – Technical Specifications	4.2.6.1 Zero-touch provisioning / device management platform	Clause 4.2.6.1 requires "secure remote provisioning and device onboarding (e.g., zero-touch provisioning or equivalent)" for RTU/edge devices. Kindly confirm whether OIL mandates a specific IoT device management platform, or bidder's choice is acceptable, and clarify licensing/subscription cost responsibility.	No specific device-management platform is mandated. Secure provisioning/onboarding and associated licences are in bidder scope.
400	Tender SOW – Technical Specifications	4.2.6.3 – Cybersecurity (hardware) TPM 2.0 / hardware secure element	Clause 4.2.6.3 requires "hardware-backed identity (e.g., TPM 2.0 class) or equivalent secure element" on RTU/edge hardware. Kindly confirm whether this is a mandatory certified requirement (with	Hardware-backed identity such as TPM 2.0 or equivalent is a mandatory cybersecurity capability. Compliance evidence shall be provided as part of testing/documentation.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			test/certification evidence needed at FAT) or an indicative guideline.	
401	Tender SOW – Technical Specifications	4.2.6.1 Mandatory vs. optional RTU/edge protocols	Clause 4.2.6.1 lists Modbus (TCP/RTU), OPC UA, DNP3 and MQTT as protocols the control platform "shall support... at minimum." Kindly confirm which of these are actually required at each site type (new RTU vs. existing ABB RTU integration vs. cellular-connected wellhead) since not all sites may need all four.	The control platform shall support Modbus TCP/RTU, OPC UA, DNP3 and MQTT at minimum. Site-specific use will be finalized during detailed engineering.
402	Tender SOW – Technical Specifications	4.1.1 Total number of installations requiring ABB RTU integration	Kindly provide a site-wise/installation-wise list of the total number of oil installations where integration with the existing ABB SCADA RTU system is required, to enable bidders to accurately plan wiring, termination, marshalling panel scope and associated site man-days.	OIL will review and revert
403	Tender SOW – Technical Specifications	4.2.1.1, Cl. 1 – Communication over Cellular Network M2M SIM & Private APN over MPLS – site split and cost	Please confirm the number/list of wellhead or field locations using cellular/M2M connectivity (Clause 1) versus those connected through existing SCADA infrastructure (Clause 2), and clarify whether setup/recurring cost of the dedicated Private APN over MPLS	Oil will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			network is borne by OIL or the bidder.	
404	Tender SOW – Technical Specifications	4.2.1.6 – Remote Site Connectivity and Data Resilience Bandwidth sizing basis (30% spare capacity)	To size bandwidth, edge storage and gateway hardware correctly, kindly share the expected/target sensor publishing rate (update interval) and typical payload size per tag/point, or confirm this is entirely a bidder design assumption subject to OIL approval during detailed engineering.	OIL will review and revert.
405	Tender SOW – Technical Specifications	4.2.1.6 72-hour store-and-forward sizing basis	Please confirm the assumed total tag/point count and publishing frequency to be used for sizing the mandated 72-hour local store-and-forward buffer capacity at the gateway/edge layer.	The bidder shall size 72-hour store-and-forward using the configured publishing frequencies and tag volumes established during detailed engineering.
406	Tender SOW – Technical Specifications	4.2.1.6 Dual-SIM/multi-operator failover – applicability	Clause 4.2.1.6 requires automatic failover via dual-SIM/multi-operator connectivity "where more than one technically viable network is available." Kindly confirm whether OIL will provide the site-wise telecom-operator viability assessment, or this is entirely a bidder site-survey responsibility, and whether the associated dual-SIM recurring cost is included in the AMC.	OIL will review and revert
407	Tender SOW –	4.2.1.3 – Note 4	Kindly share any available site-wise cellular signal-strength/coverage	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Technical Specifications	VSAT/microwave backup connectivity & recurring cost	survey data for wellhead locations to help assess whether VSAT/microwave links are additionally required, and confirm whether recurring telecom charges over the 5-year AMC period are included in the AMC rate card (BOQ Items 16-20) or quoted separately.	
408	Tender SOW – Technical Specifications	4.2.1.1 – Indicative Data Flow Architecture High-resolution/vector architecture diagram	Clause 4.2.1.1 provides an "indicative" data flow architecture diagram (image only, within the PDF). Kindly share a higher-resolution/vector or editable version (e.g., Visio/PDF-native drawing) of this architecture diagram to enable accurate solution design and BOM planning.	The tender provides an indicative architecture. No editable/vector version is specified.
409	Tender SOW – Technical Specifications	4.2.1.2 – Data Model Canonical data model / tag-naming convention	Clause 4.2.1.2 requires "all tags and calculated variables to conform to a canonical schema." Kindly confirm whether OIL has an existing tag-naming convention, canonical schema, or industry standard (e.g., ISA-95, WITSML, PPDM) to which the bidder must align, and share it if available.	A canonical schema is required; the detailed naming convention/standard will be finalized during detailed engineering.
410	Tender SOW – Technical	4.2.2 – Data Ingestion and Validation Total anticipated tag count	Kindly provide the total anticipated tag count (across SCADA, RTU, wireless sensors, artificial-lift	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications		systems, and other field instruments) to enable bidders to accurately size and license the historian, SCADA interface, and PDMS/data-broker software.	
411	Tender SOW – Technical Specifications; SLA Annexure	Cl. 16.0 (Cybersecurity); SLA Item 3 (Network Latency) Network Time Server access for RTU/edge synchronization	The data-ingestion latency SLA requires synchronized timestamps across field/edge, OT Data Lake and DOF application layers, and Cl. 16.0 separately mentions time synchronization with a "stable NTS server." Kindly confirm whether OIL will provide access to its Network Time Server for RTU/edge/field-device synchronization, or bidder must establish an independent NTP source, and specify the required accuracy.	IT NTP is for time syncing IT infra. For OT setup, a dedicated NTP must be setup by the bidder.
412	GCC / Tender SOW	Cl. 16.0 – Cybersecurity Requirements SIEM/SOAR integration scope	Please confirm whether OIL's SIEM/SOAR platform is centrally hosted with bidder only required to provide log-forwarding agents/connectors, or whether bidder must independently set up SIEM integration infrastructure, and share the platform name/version for compatibility assessment.	SIEM/SOAR solution is already in place. Bidder only need to facilitate log ingestion into the solution. Solution is from Seceon.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
413	Tender SOW – Technical Specifications	4.1.4.1.4 – Core Solution Requirements (SRP) "On-prem private cloud" vs. GCC Cl. 20.0 "MeitY public cloud"	Clause 4.1.4.1.4 requires an on-prem private cloud deployment for the SRP edge/enterprise platform, whereas GCC Cl. 20.0 (Pg 186) and Note 2 under Section 4 (Pg 162) expect a MeitY empanelled public cloud subscription routed through OIL's Azure landing zone. Kindly clarify the definitive hosting architecture required for the overall DOF solution — on-premise, public cloud, or a defined hybrid split by module.	OIL's Azure environment will be provided for hosting the DOF solution.
414	GCC / Tender SOW	Clause 20.0 – Public Cloud Subscription List of MeitY empanelled CSPs acceptable to OIL	Kindly share the current list of MeitY empanelled Cloud Service Providers acceptable to OIL, and confirm whether providers other than Microsoft Azure (e.g., MeitY-empanelled AWS/GCP/Indian CSPs) are acceptable as the primary hosting platform, given OIL's existing landing zone is specifically in Azure.	OIL's Azure environment will be provided for hosting the DOF solution.
415	GCC / Tender SOW	Note 2 under Section 4 / Cl. 20.0 Azure Landing Zone technical details	Please share technical details of OIL's existing Azure Landing Zone (available bandwidth/ExpressRoute or VPN capacity, subscription tier, existing NGFW make/model) so bidders can size the additional security gateway/NGFW/VPN components, and confirm whether	OIL's Azure environment will be provided for hosting the DOF solution. Features like NGFW/WAF etc will be facilitated by OIL.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			landing-zone-side infrastructure/licensing cost is borne by OIL or the bidder.	
416	GCC / Tender SOW	Cl. 20.0 SSO/Federation via OIL's Azure AD	Please confirm the exact Identity Provider (Azure AD/Entra ID) tenant and licensing tier (P1/P2) available for federation, and clarify whether OIL will provision the app registration/enterprise application, or procurement of additional identity federation licenses is a bidder cost.	Azure AD and Azure SSO will be facilitated by OIL
417	Tender SOW – Technical Specifications / BOQ	4.2.1.5 / 4.2.1.6 Recurring cloud subscription/compute cost — no BOQ line item	BOQ Section C (Items 16-20) covers only manpower-based AMC rate cards; there is no distinct line item for recurring cloud/compute subscription costs (Azure traffic, MeitY cloud subscription, GPU/AI accelerator costs) over the 5-year AMC. Kindly clarify whether such costs are embedded in the AMC rate card, quoted separately, or a new BOQ item will be issued.	OIL's Azure environment will be provided for hosting the DOF solution.
418	Tender SOW – Technical Specifications	General – Infrastructure Architecture (Sec. 4.2.1) Virtualized infrastructure vs. bare-metal servers	The SOW does not state whether OIL requires the on-premise DOF/SCADA infrastructure (SCADA servers, PDMS/application servers, Historian, database servers) to be deployed on a virtualized platform (VMware/Hyper-V/KVM) or dedicated bare-metal servers. Kindly	OIL will provide required cloud infra, Solution must be hosted on it.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			confirm OIL's preferred/mandated deployment model, and if virtualization is required, specify the standardized hypervisor platform in OIL's IT/OT environment.	
419	Tender SOW – Technical Specifications	General – Infrastructure Architecture Hypervisor / virtualization licensing responsibility	If virtualized deployment is required/acceptable for on-premise SCADA/DOF servers, kindly confirm whether hypervisor licenses (e.g., VMware vSphere/vCenter) are to be supplied/quoted by the bidder, or whether OIL will host the bidder's VMs on its own existing virtualization infrastructure/licenses.	OIL will provide required cloud infra, Solution must be hosted on it.
420	Tender SOW – Exit Management	Exit Management / Transition-Out, Cl. 48 VM migration clause implies virtualized deployment	Clause 48 requires the bidder to "migrate the VMs, data etc." at contract exit, which appears to primarily address cloud-hosted components. Kindly confirm whether this applies only to cloud-hosted elements, or also to on-premise SCADA/PDMS/Historian servers, consistent with the virtualization-vs-bare-metal clarification sought above.	Exit migration applies to all applicable VMs, data and solution assets, whether cloud or on-prem, as required for successful transition.
421	Tender SOW – Technical	General – Cloud Hosting Data residency requirement	Since the bidder is permitted to use any MeitY empanelled public cloud, kindly confirm whether production/OT data (SCADA,	Not applicable. Refer above comments from OIL.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications		historian, well data) must be hosted within Indian data-center regions only, per applicable regulatory/data-sovereignty requirements for O&G production data.	
422	GCC / Tender SOW	General – DR/BC for Cloud-Hosted Solution Cloud DR/backup region requirement	Kindly confirm whether a geographically separate Disaster Recovery region/availability zone is mandated for the cloud-hosted DOF application, and if so, specify the required Recovery Time Objective (RTO) and Recovery Point Objective (RPO).	Disaster recovery is not required.
423	Tender SOW – Technical Specifications	4.2.1.5 – AI/ML Compute Infrastructure and Sizing Cloud GPU vs. on-prem GPU for AI/ML workloads	Clause 4.2.1.5 requires the bidder to propose CPU/GPU/AI accelerator/cloud/edge architecture for AI/ML workloads. Kindly confirm OIL's preference (or acceptance) between cloud-based GPU compute (e.g., Azure GPU-series) and on-premise GPU servers, since this materially affects both cost and the on-prem vs. cloud architecture decision.	OIL will provide required cloud infra, Solution must be hosted on it.
424	GCC / Tender SOW	Cl. 20.0 Cloud cost — fixed quote vs. pass-through on actuals	Please clarify whether bidders are to quote a fixed cloud subscription cost for the entire 5-year AMC period (assuming static usage), or whether actual cloud consumption costs will be reimbursed separately	OIL will provide required cloud infra, Solution must be hosted on it.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			by OIL on actuals (pass-through), given cloud costs typically scale with data volume and compute usage over time.	
425	Tender SOW – Technical Specifications	4.2.1.3 87 vs. 90 wells — Yokogawa/Kelton well-count discrepancy	Text states Yokogawa (10 wells) + Kelton (77 wells) = 87 wells, whereas the following paragraph refers to "existing well head data of 90 wells" on cloud. Kindly clarify the correct total, and confirm data format, API/protocol specifications, and edge-device details of these systems for integration-effort assessment.	The integration scope is the existing wellhead data of 90 wells as stated in Clause 4.2.1.3. Make/model details of existing RTUs and modems will be provided during detailed engineering
426	Tender SOW – Technical Specifications	4.2.1.3 Decommissioning of existing cloud services — scope & timeline	It is stated that upon successful commissioning, "the existing cloud services shall be decommissioned." Kindly clarify whether decommissioning of Yokogawa/Kelton cloud subscriptions is bidder's or OIL's responsibility, the timeline, and whether any data-handover/exit documentation from existing vendors will be provided by OIL.	The bidder shall complete integration and data consolidation. Existing cloud services will be decommissioned after successful commissioning; the tender does not assign a separate bidder decommissioning BOQ item.
427	Tender SOW – Technical Specifications	4.2.1.3 Cooperation/access from existing SCADA & wellhead-monitoring OEMs	Kindly confirm whether OIL will facilitate bidder's access to, and cooperation from, the existing SCADA (ABB), Yokogawa and Kelton OEMs/system integrators for protocol	OIL will provide available existing-system details during detailed engineering. The bidder remains responsible for all interfaces, licences and

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			documentation, API access, and any license modifications required, and clarify if an OEM No-Objection Certificate (NOC) is required.	coordination required for integration.
428	Tender SOW – Technical Specifications	4.2.3 – Production Data Management System "GRPC" — undefined integration system	"GRPC" is referenced as an existing system/data source for PDMS integration (with RTPMA) but is not defined in the Abbreviations table (Pg 93-95) and does not appear to refer to the gRPC communication framework. Kindly provide the full form and technical interface details of "GRPC" as used in this tender.	GRPC is identified as an existing PDMS source system, but its full form/interface details are not defined. Details will be finalized during detailed engineering.
429	Tender SOW – Technical Specifications	8.0 – Common Deliverables, (xi) "System Integration with existing SCADA, historian, ERP, and other systems" — scope boundary	Kindly clarify whether this deliverable is a consolidated summary of the SCADA/RTU/OT Data Lake integration scope already detailed under Section 4.2.1, or whether it additionally covers integration with ERP modules beyond SAP S/4HANA and other unnamed third-party systems.	The common deliverable covers integration with all in-scope existing systems, including SCADA, historian, ERP/SAP and other systems identified during detailed engineering.
430	GCC / Tender SOW	Cl. 19.0 – Obligations of OIL SAP S/4HANA integration — interface details and license ownership	Clause 19.0 states OIL will arrange SAP integration software licenses for the bidder. Kindly confirm the specific SAP modules/interfaces (BAPI/OData/IDoc) to be integrated, the expected data exchange frequency, and whether SAP-side configuration/interface	OIL will arrange SAP integration software licences. Detailed modules, interfaces and frequency shall be finalized during detailed engineering; bidder shall provide the solution-side integration.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			development is OIL's or bidder's responsibility.	
431	Tender SOW – Technical Specifications / Annexures	Background (2.2.1); Annexure-A; Annexure-B Reconciliation of well-count figures across the tender	The tender variously references 90 wells (existing cloud migration), 380 wells (Annexure-A sensorization), 631 total active wells (background), 700 wells (platform capacity sizing, Cl. 4.2.1.7), and well-plinth totals of 45+65+35+69=214 (Annexure-B, Eastern/Western/Rajasthan/Upcoming). Kindly reconcile these figures and confirm the definitive well/tag count basis for SCADA, RTU, historian and cloud infrastructure sizing.	The figures refer to different scopes: 631 current producing wells, 380 prioritized for sensorization, 700 platform capacity, 90 existing cloud-connected wells, and Annexure-B plinth counts. Infrastructure shall be sized for 700 wells. Additionally, well details will be shared, bidder has to assess well count details.
432	Tender SOW – Technical Specifications	4.2.3 Existing production allocation/legacy PDMS system — replacement & data migration	Kindly confirm whether an existing legacy production data management/allocation tool is currently in use at OIL that the new PDMS will replace, and if so, whether historical data migration from the legacy system into the new PDMS is within bidder's scope.	Historical-data QC and upload into PDMS are in bidder scope.
433	Tender SOW – Section III	Cl. 8.0(a) – VAPT CERT-In empanelled agency selection & cost	Clause 8.0(a) requires VAPT through a CERT-In empanelled agency, once before Go-Live and annually thereafter. Kindly confirm whether OIL will nominate the empanelled agency, or the bidder is to select one subject to OIL's	VAPT shall be conducted annually through a CERT-In empanelled agency, selected/managed by the bidder, with all costs included in bidder scope.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			approval, and confirm the cost is entirely within bidder's scope.	
434	Tender SOW – Section III	Cl. 8.0(b) – SBOM SBOM format/tooling standard	Clause 8.0(b) requires a detailed Software Bill of Materials. Kindly confirm whether a specific SBOM format/standard (e.g., SPDX, CycloneDX) is mandated by OIL, or the bidder may propose its own tooling and format.	No specific SBOM format is mandated. The SBOM must contain the information listed in SCC Clause 8.0(b) and remain updated throughout the contract.
435	GCC / Tender SOW	Cl. 16.0 – Cybersecurity Requirements IEC 62443 Security Level (SL) target	Cybersecurity requirements reference compliance with NIST SP 800-53 and IEC 62443 for cloud service providers. Kindly specify the target IEC 62443 Security Level (SL-1 through SL-4) applicable to the OT/SCADA zones under this scope, and the applicable NIST SP 800-53 control baseline (Low/Moderate/High).	The tender requires compliance with NIST SP 800-53 and IEC 62443 but does not specify a particular security level/control baseline.
436	Tender SOW – Technical Specifications	4.2.1.1, Cl. 4 – Control Commands Purdue Model Level 3/3.5 (DMZ) ownership	The architecture mandates no control command originate from Level 4/5 (cloud) systems, with all autonomous control executing at Level 1/1.5. Kindly confirm ownership of the DMZ/Level 3.5 firewall infrastructure — existing with OIL, or to be designed/supplied/commissioned	Cloud systems are advisory only; autonomous control executes locally. The bidder shall provide required security gateways/firewalls within its scope, while detailed OT/IT architecture will be finalized during detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			by the bidder — and share the existing OT/IT (Purdue model) network architecture diagram, if available.	
437	GCC / Tender SOW	Cl. 16.0 OIL's Data Protection Policy for OT assets — document availability	Clause 16.0 references compliance with "Data Protection Policy for OT assets" and "Patch Management Policy." Kindly confirm whether copies of these internal policy documents can be shared with bidders at the pre-bid stage to enable accurate compliance-cost estimation.	The solution shall comply with OIL's Data Protection, Patch Management and other ICT policies. Copies/details are not included in the tender and will be addressed during onboarding.
438	Tender SOW – Technical Specifications	4.2.6.3 – Cybersecurity (hardware) Application signing / trusted code execution — PKI/code-signing certificate authority	Clause 4.2.6.3 requires "application signing / trusted code execution" for RTU/edge controllers. Kindly confirm whether OIL will provide a code-signing certificate authority/PKI infrastructure for this purpose, or whether the bidder must establish and maintain its own code-signing infrastructure.	Application signing/trusted execution is required. The tender does not specify OIL-provided PKI; the bidder shall include the required mechanism in its solution.
439	Tender SOW – Technical Specifications	4.2.1.1, Cl. 3 – Communication Security Encryption standards for SCADA–OT Data Lake–Cloud communication	Please specify the mandatory encryption standards/protocols (minimum TLS version, AES-256, VPN/IPsec specifications) and any PSU-specific or CERT-In compliance requirements applicable to communication between field devices/SCADA, the OT Data Lake, and cloud-hosted DOF applications.	Communications shall use secure industry-standard encryption. Specific cipher/TLS/IPsec parameters are not stated and shall be finalized under OIL cybersecurity requirements.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
440	Tender SOW – Technical Specifications	4.2.6.3 LDAP/Active Directory integration for RBAC	Clause 4.2.6.3 references "optional directory integration (e.g., LDAP)" for role-based access control on edge/RTU devices. Kindly confirm whether integration with OIL's corporate LDAP/Active Directory is mandatory for this scope, and share the applicable directory-service details.	LDAP/directory integration is optional where applicable; corporate IdP integration using SAML/OIDC is required for the platform. Detailed directory information will be finalized during implementation.
441	SLA Annexure	SLA Definitions / Uptime SLA Scope of "Solution" for 99.95% uptime calculation	The Uptime SLA of 99.95% (Pg 202-203) applies to "the Solution." Kindly clarify whether this is calculated for the entire integrated DOF platform (SCADA + PDMS + all AL modules + dashboards) as a whole, or whether uptime is tracked and penalized per individual module/sub-system.	The 99.95% uptime applies to the identified solution components, including data pipelines, analytics/AI, dashboards/reports/simulation interfaces and APIs. Uptime is calculated component-wise as defined in the SLA.
442	Tender SOW – Technical Specifications	4.2.1.7 – Platform Performance and Capacity Benchmarks Sizing basis — well count for capacity benchmarks	Clause 4.2.1.7-B requires the platform to support ingestion for "700 wells," which differs from other well-count references in the document (90/380/631/214-plinth total). Kindly confirm the definitive well/tag count to be used as the sizing basis for platform performance and capacity benchmarking (consistent with Query under Section E above).	The definitive platform capacity benchmark is 700 wells.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
443	Tender SOW – Technical Specifications	4.2.1.7-C Concurrent simulation runs — defining "OIL-approved user-initiated"	Clause 4.2.1.7-C requires support for "at least five concurrent OIL-approved user-initiated simulation or what-if analysis runs." Kindly clarify the approval workflow/criteria for such runs and confirm if this cap of five is a hard architectural limit or a minimum baseline.	Five concurrent OIL-approved simulation/what-if runs is a minimum baseline. Approval workflow shall be configured during implementation.
444	Tender SOW – Technical Specifications	4.2.1.7-B 15-minute backlog clearance — infrastructure sizing basis	Clause 4.2.1.7-B requires any temporary data-ingestion backlog to be cleared within 15 minutes after removal of additional test load. Kindly confirm the peak load multiplier/test-load assumptions OIL will use during the Platform Performance and Capacity Test so bidders can size infrastructure headroom accurately.	The tender does not prescribe a peak-load multiplier. The bidder shall submit sizing assumptions and demonstrate 30% headroom and the stated backlog-clearance benchmark using OIL-approved test workloads.
445	GCC / Tender SOW	General – Disaster Recovery DR site requirement & RTO/RPO	The tender does not specify a Disaster Recovery site requirement, location, or target Recovery Time Objective (RTO)/Recovery Point Objective (RPO) for the SCADA/DOF platform. Kindly confirm whether a geographically separate DR site is mandated (and if so, where), and specify the RTO/RPO targets.	A geographic DR site and numeric RTO/RPO are not specified. The bidder shall propose backup, redundancy and recovery architecture meeting the SLA. Geographic Disaster recovery site is not required.
446	GCC / Tender SOW	Cybersecurity Cl. (Pg 184-related backup reference)	The tender references compliance with "OIL's data backup policy" for the solution's backup and recovery	Backup requirements shall align with OIL's ICT Data Backup Policy;

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		OIL's Data Backup Policy — document availability	process. Kindly share this policy document (or its key requirements — backup frequency, retention, off-site/immutable backup mandates) at the pre-bid stage to enable accurate backup-infrastructure sizing.	frequency/retention will be finalized with OIL. The policy text is not included in the tender.
447	Tender SOW – Technical Specifications	4.2.1.1, Cl. 4 Autonomous control functions — consistency of Level-1/1.5 restriction across all AL modules	Clause 4.2.1.1(4) restricts all autonomous control (choke, production valve, SRP VFD, ESP VFD, gas-lift injection) to execute only within field RTU/PLC/Edge Controller at Level 1/1.5, with cloud limited to advisory/read-only. Kindly confirm this restriction applies uniformly and without exception across every artificial-lift optimization module (SRP, Plunger, Gas-Lift/AGLO, ESP) described elsewhere in Section 4.1.4/4.2.5-4.2.8.	OIL will review and revert
448	Tender SOW – Introduction / Background	2.2.1 – Production Operations at OIL Existing SCADA/RTU infrastructure — common or region-specific	OIL's operations span Assam (majority), Rajasthan and Arunachal Pradesh. Kindly confirm whether the existing ABB SCADA/RTU infrastructure referenced for integration (Pg 100, 120-123) is common/standardized across all three regions, or whether each	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			region runs a different SCADA OEM/version, requiring region-specific integration approaches.	
449	Tender SOW – Annexure-B	Annexure-B — Rajasthan Fields (35 well plinths / 45 SRPs) Rajasthan Fields — existing SCADA/RTU/telecom infrastructure details	Annexure-B identifies 35 well plinths (covering 45 SRP wells) in the Rajasthan Fields, in addition to the Eastern (45) and Western (65) Fields in Assam. Kindly confirm whether Rajasthan Fields have separate existing SCADA/RTU/telecom infrastructure and vendor, requiring a distinct integration design, and share equivalent technical details as requested for the Assam-based ABB RTU system.	Well will provide
450	Tender SOW – Technical Specifications	General – Remote Site Connectivity (Cl. 4.2.1.6) Region-wise telecom/network survey data	Given cellular network coverage, ISP availability and terrain vary significantly between Assam, Rajasthan and Arunachal Pradesh, kindly confirm whether OIL will provide region-wise connectivity/coverage survey data, or whether bidders must independently conduct site surveys across all three regions prior to price-bid submission.	Connectivity coverage survey is in bidders' scope
451	Tender SOW – Technical	Cl. 4.2.23 – Special Terms (Installation & Commissioning Charges)	Clause 4.2.23(2) requires bidders to factor in travel, boarding/lodging and local transport costs at both	The team deployment should be as per tender requirement. Bidder shall deploy adequate

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications	Multi-location mobilization costing (Duliajan/Assam vs. Jodhpur/Rajasthan)	FHQ-Duliajan (Assam) and Rajasthan Fields. Kindly confirm whether separate mobilization teams/resident engineers are expected for Assam and Rajasthan Fields, or a single mobile team is expected to cover both regions, to enable accurate manpower/logistics costing.	resources and include travel/logistics for Duliajan, Rajasthan and other locations.
452	Tender SOW – Technical Specifications	4.2.5.1 – Architecture and Hardware (SRP) VFD/RPC — OEM empanelment or open specification	Kindly confirm whether OIL has an empanelled/preferred VFD-RPC (Rod Pump Controller) OEM for the 28 SRP wells, or whether the specification is entirely open, subject to meeting the functional requirements of Cl. 4.2.5.1 and 4.2.13.10.	OIL will and revert
453	Tender SOW – Technical Specifications	4.2.13.10 – VFD for SRP pumps Hazardous-area classification per SRP well site	Please share the hazardous-area classification (Zone 1/2, Division 1/2, or Unclassified/Safe Area) for each of the 28 SRP well sites, to enable accurate VFD panel enclosure and certification design.	Site-wise hazardous-area classification is not provided. Equipment shall comply with applicable OMR 2017/site requirements finalized during detailed engineering.
454	Tender SOW – Technical Specifications	4.2.6.1 – Plunger Lift Architecture Dual-layer edge architecture — single integrated device acceptable?	Clause 4.2.6.1 requires a "dual-layer edge architecture" comprising a separate deterministic control unit and an industrial edge compute unit. Kindly confirm whether a single, integrated device meeting both the deterministic (IEC 61131-3) and edge-compute/AI-analytics	The tender specifies a dual-layer architecture comprising deterministic adaptive control/optimization and industrial EDGE compute units.

Sl. No.	Section	Clause Reference	Query	OIL's Response
			requirements is acceptable, or two physically separate units are mandatorily required.	
455	Tender SOW – Technical Specifications	4.2.7.1 – Gas-Lift Optimization & AGLO Architecture Existing gas-lift network hydraulic model/simulator	For the AGLO (Autonomous Gas Lift Optimization) nodal and network optimization, kindly confirm whether OIL already has an existing gas-lift network hydraulic model/simulator in use that the bidder's solution must interface with or replace, or whether the bidder is to build the network model from scratch.	The bidder shall develop the required gas-lift nodal/network model. The tender does not identify an existing OIL simulator to be reused.
456	Tender SOW / BOQ	BOQ Item 5 — Gas-Lift Optimization (AGLO) Compressor integration — existing gas compressor details	BOQ Item 5 references "compressor integration" as part of the AGLO scope. Kindly share the make, model, and control-system details of the existing gas-lift compressors requiring integration, and confirm the communication interface (SCADA/PLC/Modbus) available on these compressors.	OIL will provide required information during detailed engineering phase
457	Tender SOW – Technical Specifications	4.2.8 – ESP Optimization Existing ESP VFD/controller details for the 8 existing ESP wells	Of the 631 active wells, 8 are currently ESP-assisted (Pg 96). Kindly confirm whether these 8 wells already have VFD/ESP controllers installed (and if so, share make/model/protocol for integration), or whether new VFD/ESP controller hardware is	OIL will provide Relevant available data.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			required for all 8 per BOQ Item 25 (28 nos. VFD for ESP wells).	
458	Tender SOW – Technical Specifications	4.2.8 – ESP Optimization, Physics core ESP pump performance curves — source	Clause 4.2.8 requires ESP head-flow-efficiency curves and motor thermal/thrust limits as machine-readable envelopes for the physics-based model. Kindly confirm whether OIL will provide existing ESP pump catalog performance curves, or whether obtaining these from the respective ESP OEMs is entirely the bidder's responsibility.	OIL will share available information; the bidder shall obtain other required data during implementation.
459	Tender SOW – Technical Specifications	4.2.1.1 Cl. 4; 4.2.5–4.2.8 Consistency of advisory-only cloud control across all AL modules	Please confirm the Autonomous Gas Lift Optimization (AGLO), Plunger-Lift automated cycle management, SRP autonomous control logic, and ESP closed-loop PI/frequency control all route final setpoint execution through the field RTU/PLC/Edge Controller with mandatory local/Level-3 operator review (per Cl. 4.2.1.1(4)), i.e., none of these "autonomous" modules bypass this restriction via direct cloud-to-actuator control.	Confirmed. Final setpoint execution shall remain within field EDGE controllers; cloud systems shall not issue direct or indirect control commands.
460	Tender SOW – Technical Specifications	4.2.14 / Field Instrumentation, ATEX/IECEx/Class I Div 2 Indian statutory hazardous-area certification (PESO) vs. ATEX/IECEx	Various hardware clauses (e.g., Cl. 4.2.6.1) reference ATEX/IECEx/Class I Div 2 hazardous-area certification. Since the installations are in India, kindly confirm whether	Hazardous-area equipment shall comply with OMR 2017 and applicable Indian statutory requirements. Supporting IECEx/ATEX/NABL/Governm

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			PESO (Petroleum and Explosives Safety Organisation)/CCOE certification is the mandatory statutory requirement (per OMR 2017, referenced at Pg 152) in addition to or instead of ATEX/IECEx, for all actuated valves, VFDs, transmitters and RTU/edge enclosures.	ent-laboratory documents shall be provided as specified.
461	Tender SOW – Technical Specifications	4.2.18 – Installation Scope Total number of well sites requiring hazardous-area rated equipment	Kindly confirm the total count and site-wise hazardous-area classification of all well locations across Eastern, Western and Rajasthan Fields (Annexure-B) to allow bidders to accurately determine the quantity of ATEX/IECEx/PESO-certified vs. safe-area equipment required in their commercial offer.	Site-wise hazardous-area counts/classification are not provided and shall be confirmed during site survey/detailed engineering.
462	Tender SOW – Technical Specifications	4.2.3 – Production Data Management System Legacy PDMS/production-allocation system — replacement & data migration	Kindly confirm whether an existing legacy production data management/allocation tool is currently in use at OIL that the new PDMS will replace, and if so, whether historical data migration from the legacy system into the new PDMS is within the bidder's scope.	Historical-data QC and upload into PDMS are in bidder scope. The tender does not identify a specific existing IPSM/PDMS replacement application.
463	Tender SOW – Technical	4.2.10 – Virtual Flow Metering VFM calibration — well-test data availability	VFM accuracy targets (Oil/Water MAPE ≤10-15%, Gas MAPE ≤15-20%) require offline calibration using well-test or reference data. Kindly	OIL conducts well test once a month. Well testing is not in bidders' scope. MPFM/Test

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications		confirm the number/frequency of physical well tests OIL will make available during the contract period for VFM calibration and re-tuning, or whether the bidder must independently arrange well testing.	Separator/SCADA data shall be used for VFM validation
464	Tender SOW – Technical Specifications	4.2.11 – Integrated Production System Modelling (IPSM) Preferred/licensed network simulation software	Kindly confirm whether OIL already holds a license for a specific production-network simulation software (e.g., PIPESIM, OLGA, PROSPER, or equivalent) for the IPSM module, or whether the bidder is free to propose and license any equivalent simulator meeting the functional requirements of Cl. 4.1.7/4.2.11.	OIL will review and revert
465	Tender SOW – Technical Specifications	4.2.9 – AI-Based Digital Well Integrity Existing Well Integrity Management / Barrier Philosophy document	Clause 4.2.9 requires MAASP calculations and barrier-state dashboards. Kindly confirm whether OIL has an existing Well Integrity Management System or documented Barrier Philosophy that the bidder's solution must align with, and share it if available.	The tender does not identify an existing Well Integrity Management System or Barrier Philosophy document. The solution shall align with specified standards and OIL-approved workflows.
466	Tender SOW / BOQ	BOQ Item 7 – AI-based Digital Well Integrity Management Basis for "≥160 self-flow wells" scope	BOQ Item 7 scopes Well Integrity Management for "≥160 self-flow wells." Kindly confirm the basis/list of these 160+ wells (out of the total 631 active wells) and clarify whether this count is expected to	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			grow during the contract tenure and, if so, whether that falls within the "no extra cost" scalability clause (Cl. 4.2.12 Note, Pg 139).	
467	Tender SOW – Technical Specifications	4.2.12 – Visualization, Reporting & Decision Support CCC (Command & Control Centre) — platform & API details	Clause 4.2.12 requires bidder integration with OIL's existing Command & Control Centre (CCC) for dashboard showcasing. Kindly share the CCC's existing technology platform, available API specifications/protocols, and data format requirements to enable bidders to accurately scope this integration.	CCC platform/API details are not specified. Integration requirements will be finalized during detailed engineering under the CCC scope.
468	Tender SOW – Technical Specifications	4.2.12 – Self-service analytics Existing Power BI/Excel licensing for governed datasets	Clause 4.2.12 references self-service analytics via governed datasets for "Power BI/Excel." Kindly confirm whether OIL has existing Power BI Premium/Pro licenses that the bidder's solution can leverage, or whether the bidder must independently supply and quote for this licensing.	Power BI/Excel are referenced for self-service analytics. The bidder shall provide required solution-side licences.
469	Tender SOW – Technical Specifications	4.2.12 Scalability for future wells — cost implications	Clause 4.2.12 (Note) requires the solution to remain "fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications." Kindly confirm the maximum well-count growth ceiling (if any) OIL anticipates over	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			the 6-year contract (72 months per Cl. 4.0) for bidders to size infrastructure headroom without open-ended liability.	
470	Tender SOW – Technical Specifications	4.2.18 – Installation scope Approved/preferred vendor list for transmitters, flow meters, VFDs	Beyond the preferred makes listed for SS tubing/fittings (Parker, Swagelok, Sandvik, Hylok, Hoke, Fittok), kindly confirm whether OIL maintains an approved/preferred vendor list for wireless transmitters, flow meters, VFDs and actuated valves, or whether selection is entirely open subject to meeting the technical specification.	No approved vendor list is specified for transmitters, meters, VFDs or actuated valves. Equipment shall meet the tender specifications and obtain OIL approval.
471	Tender SOW – Technical Specifications / BOQ	4.2.13.8; BOQ Items 21, 22, 35 Wireless spectrum interference/coexistence study	With approx. 1,957 wireless transmitters (1,403 pressure + 554 temperature) and 200 wireless gateways operating in the license-free 2.4GHz ISM band (WirelessHART/ISA100.11a), kindly confirm whether a site-density/RF-interference/coexistence study is required, and whether this is a bidder or OIL responsibility, particularly at densely instrumented installations.	Wireless network engineering, including RF/site-density assessment and coexistence design, is bidder responsibility to achieve the required reliability.
472	Tender SOW – Technical Specifications	4.2.13.2 – Wireless transmitter specification Battery replacement responsibility during 5-year AMC	Wireless transmitter battery life is specified as a minimum of 3 years. Given the AMC period is 5 years, kindly confirm whether battery replacement (one or more cycles)	Oil will review and revert

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			during the AMC is included within the AMC scope/cost, or is a separate consumable cost to be billed to OIL.	
473	Tender SOW – Technical Specifications	4.2.18 Hazardous-area classification drawings — availability	Kindly confirm whether site-wise hazardous-area classification drawings/documents are available for bidder reference at the pre-bid stage (or during the mandatory site visit) for all instrumentation locations across the scope.	Site requirements shall be assessed during the visit and detailed engineering.
474	Tender SOW / BOQ	BOQ Item 54 — Migration of instruments (30 events) Basis for 30 migration events; advance notice for planning	Kindly clarify the basis for the figure of "30" migration events (BOQ Item 54) over the AMC period, and confirm whether OIL will provide advance notice of planned instrument migrations to enable bidder resource planning during AMC.	BOQ Item 54 provides 30 migration events paid pro rata. Event scheduling/notice will be based on OIL's actual requirement; no fixed notice period is specified.
475	Tender SOW – Technical Specifications	4.2.20 – Factory Acceptance Test (FAT) Minimum acceptable scale factor for FAT performance demonstration	Clause 4.2.20(6) requires the bidder to demonstrate the proposed architecture's capability to execute approved performance-test scripts "using a scaled or production-equivalent environment," supported by sizing calculations correlating FAT load with production architecture. Kindly confirm the minimum acceptable scale factor (e.g., % of total wells/tags) OIL will consider adequate for FAT demonstration.	No minimum FAT scale factor is specified. Any scaled environment must be supported by sizing calculations correlating FAT load with the production architecture.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
476	Tender SOW – Technical Specifications; Annexure-B	4.2.21 – Site Acceptance Test (SAT) 72-hour SAT window — parallel vs. sequential across 214 well plinths	Clause 4.2.21(2) requires OIL to witness 72 hours of uninterrupted operation "at each well plinth" (Annexure-B lists 214 total plinths across Eastern/Western/Rajasthan Fields plus upcoming AL wells). Kindly confirm whether this 72-hour SAT can be conducted in parallel/staggered batches across multiple plinths simultaneously, or must be strictly sequential, which would materially affect the overall implementation timeline.	The tender requires 72-hour uninterrupted operation at each plinth. The SAT execution sequence/batching shall be defined in the approved SAT procedure and implementation plan.
477	Tender SOW – Technical Specifications	4.2.21(6) – Platform Performance and Capacity Test Test dataset provisioning responsibility	Kindly confirm whether OIL will provide production-representative test datasets for the Platform Performance and Capacity Test (concurrent-user load, peak data-ingestion, analytics workloads), or whether the bidder must independently synthesize its own representative test data.	Performance testing shall use OIL-approved production-representative datasets and scenarios. The bidder shall support data preparation and testing as part of its scope.
478	Tender SOW – Technical Specifications	4.2.21 — Note Minimum completion threshold for Go-Live with partial installation	The Note under Cl. 4.2.21 allows Go-Live "without 100% installations" at OIL's management/user department discretion, with vendor payment adjusted accordingly. Kindly clarify the minimum completion percentage (of wells/installations) OIL would	OIL will review and revert

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			generally consider acceptable to declare a partial Go-Live for payment-milestone purposes, to enable more predictable cash-flow planning by bidders.	
479	BOQ	BOQ Section H — Manpower & Mobilization (Item 50) Headcount/duration per role for lumpsum pricing	BOQ Item 50 (Manpower & Mobilization – Implementation) lists multiple roles (Project Leader, Project Manager, Lead Field Instrumentation Engineer, Data Scientist, SME-Production, Resident Engineer, Simulation/Analytics Expert, Process Expert, Instrumentation Expert) under a single Lumpsum entry. Kindly provide the expected headcount and deployment duration per role to enable accurate lumpsum pricing.	Minimum implementation FTEs are specified in Section 7. Additional specialists are "as applicable." Bidder shall deploy adequate manpower and quote BOQ Item 50 as lumpsum.
480	BOQ	BOQ Items 17-20 — AMC Years 2-5 (rate card, 4000 Manhour notional) Currency, inclusions and use in bid evaluation	For BOQ Items 17-20 (AMC Years 2-5, priced on a "notional annual value... paid on actuals" basis at 4,000 man-hours/year), kindly confirm (a) the currency for quoting, (b) whether the hourly rate is inclusive of all overheads/travel or a pure labour rate, and (c) how these notional values will be used in bid evaluation/L1 determination relative to the fixed-price BOQ items.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
481	BOQ	BOQ Section F — Spare Management (Items 47-49) Basis for spare-parts quantities	Kindly confirm the calculation basis for the spare quantities in BOQ Items 47-49 (approx. 10% of the corresponding main-item quantities), and clarify whether additional spares beyond these quantities, if consumed during the contract, will be reimbursed separately or must be replenished by the bidder at no extra cost.	OIL will review and revert
482	BOQ	BOQ Item 54 — Migration of Instruments Lumpsum vs. per-event unit-rate pricing basis	BOQ Item 54 ("Migration of instruments from one location to another per site") is listed as "Lumpsum" with a quantity of 30. Since the Terms of Reference (Pg 223) describe this as priced "for 30 events and paid pro rata" per event, kindly clarify whether bidders should instead quote a per-event unit rate (to be multiplied by 30 for BOQ totalling), rather than a single lumpsum figure.	BOQ Item 54 quantity is 30 events; payment is pro rata. The quoted rate should support per-event payment against actual migrations.
483	BOQ	BOQ Items 43-45 — Training Travel/boarding/lodging inclusion in training lumpsum	Kindly confirm whether travel, boarding and lodging costs for the 3 software-training batches (20 users each, 5 days per batch) and the instrumentation training (bidder-premises and OIL-onsite, per Items 44-45) are included within the	OIL will provide the travel, boarding and lodging cost for the trainees.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			quoted lumpsum training cost, or to be quoted/reimbursed separately.	
484	BOQ / Tender SOW	BOQ Items 21-24 (Reference Clause column) Optional/additional BOQ line items for identified scope gaps	Given the scope gaps identified in these pre-bid queries (e.g., SCADA server hardware/software, Historian, recurring cloud subscription), kindly confirm whether bidders are permitted to propose additional/optional BOQ line items for such items in their commercial bid, or whether OIL will issue a revised/corrigendum BOQ incorporating these items prior to bid submission.	Bidders shall quote strictly against the prescribed BOQ. All components necessary for complete delivery, including items not separately listed, shall be included within the relevant line items.
485	GCC	Cl. 24.0 – Customs Duty List of DOF hardware items eligible for concessional customs duty	Clause 24.1 references a customs duty concession under Notification No. 45/2025-Cus, Sl. No. 229 for petroleum-operations equipment. Kindly confirm the specific list of DOF hardware items (RTU, SCADA servers, gateways, VFDs, transmitters, etc.) that qualify for this concessional duty treatment, and the certification process required.	Concessional customs duty applies only to items in List-16 of Notification No. 45/2025-Cus. The bidder shall identify eligible imports in Proforma-A; OIL will issue the requisite certificate for eligible listed items.
486	GCC	GST — Cloud/SaaS Subscription GST treatment for cloud/SaaS components	Given OIL's mixed GST input-tax-credit eligibility position (Cl. 33.4/33.5, Pg 90), kindly confirm the applicable GST treatment (place of supply, reverse-charge	The bidder is responsible for correct GST classification, rate, place of supply and reverse-charge treatment. The

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			applicability) for cloud subscription/SaaS components of the DOF solution, particularly where the cloud service provider may be based outside India or supplying under an aggregator model.	quote should be including GST.
487	BOQ / SOR	General — Schedule of Rates (SOR) Currency and INCOTERMS basis for the entire BOQ	Kindly confirm whether the entire BOQ/SOR is to be quoted in Indian Rupees (INR) only, or foreign bidders may quote hardware items in foreign currency, and clarify the applicable delivery terms (CIF/DDP/Ex-Works, etc.) for imported hardware components such as SCADA servers and specialized instrumentation.	Indian bidders shall quote in INR only. Foreign bidders may quote in RBI-notified foreign currencies plus INR for India expenditure. Delivery/import costs shall be included as required by the tender.
488	BOQ / SOR	General — Schedule of Rates (SOR) Price basis — firm and fixed vs. price variation for hardware components	Given the contract duration of 72 months (Cl. 4.0, Pg 168) and the GCC requirement (Cl. 6.1) that prices remain firm during contract performance, kindly confirm whether any price-variation/escalation clause applies to hardware components (servers, RTU, VFDs) procured during later years of the 5-year AMC period, given potential component-level price/availability changes over such a long horizon.	Prices shall remain firm during contract performance except for statutory variations expressly permitted in the tender. No general hardware-price escalation is provided.

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489	BOQ / SOR	General — BOQ Section A (Core Application & Analytics Modules) Basis for evaluating 13 lumpsum software module items	BOQ Section A lists 13 core application/analytics modules (PDMS, Remote Wellhead Monitoring, SRP, Plunger-Lift, AGLO, ESP, Well Integrity, VFM, IPSM, Dashboards, Cybersecurity, Integration Services, PMO) all as individual Lumpsum items. Kindly confirm whether OIL will evaluate/compare these on a module-by-module basis, or only as an aggregate total, since this affects how granularly bidders should break down internal costing.	Price evaluation is on the overall lowest total cost to OIL, including all BOQ sections and GST, not module-wise ranking.
490	Tender SOW – Payment Terms	Software Milestone 2 (20% payment) Partial payment release — architecture vs. HSE/cybersecurity onboarding	Milestone 2 bundles "completion of all contract-related compliances, HSE and cybersecurity onboarding" together with delivery of the high-level solution architecture and detailed sensorization design. Kindly confirm whether partial payment release is possible if the architecture/design deliverables are approved but HSE/cybersecurity onboarding is still pending (or vice versa), or whether this is strictly an all-or-nothing milestone.	Milestone 2 payment is linked to completion and acceptance of all listed deliverables. No partial-payment mechanism is specified.
491	Tender SOW – Payment Terms	Software Milestone 4 (40% payment) "100% material value of line-item 14" — user-license activation timing	Milestone 4 payment includes "100% material value of line-item 14 as per BOQ" (Web Application Users). Kindly clarify whether this implies	Milestone 4 releases 100% of BOQ Item 14 material value upon Go-Live acceptance. Licence deployment shall

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			all 150/180 user licenses (per the discrepancy raised in Section A) must be procured/activated at Go-Live even if actual initial user onboarding is to be phased across departments.	comply with the contracted user and performance requirements.
492	Tender SOW – Payment Terms	Software Milestone 3 (30% payment) "Acceptance of sensor commissioning reports" — completion basis	Milestone 3 links payment to "acceptance of sensor commissioning reports and live data availability." Kindly confirm whether the % completion for this milestone is assessed per-well, per-installation, or as an aggregate percentage across the total contracted well count.	Milestone 3 acceptance is based on approved sensor commissioning reports and live data availability. The tender does not prescribe a separate per-well or aggregate percentage method.
493	Tender SOW – Payment Terms	AMC Payment — Line Item 15 (25%/75% split) Payment trigger — first partial Go-Live vs. final Go-Live	Line Item 15 payment is structured as 25% after 90 days and 75% over the following three quarters from "Date of Go-Live." Given the SOW allows phased/partial Go-Live (Cl. 4.2.21 Note), kindly clarify whether this 90-day clock starts from the first partial Go-Live for any subset of wells, or only from the final/complete Go-Live.	OIL will review and revert
494	Tender SOW – Payment Terms	Instrumentation Payment Milestone 1 (80% on material receipt) Per-shipment vs. per-consignment assessment	Milestone 1 releases 80% of material value "upon receipt of all material at site." Given 214 well plinths across three regions are likely to receive staggered/phased material deliveries, kindly confirm whether	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			this 80% payment is assessed and released per individual BOQ line-item shipment as received, or only once the entire consignment for a given site/phase is complete.	
495	SLA Annexure	Cl. 2 — Liquidated Damages (Go-Live delay) LD cap basis — total vs. per-phase, across multi-region implementation	Liquidated Damages for delay in final Go-Live are capped at 7.5% of Implementation Cost. Given the multi-region (Assam/Rajasthan) phased implementation, kindly confirm whether this cap applies to the total Implementation Cost across all regions/phases combined, or separately per region/phase.	The final Go-Live LD cap is 7.5% of total Implementation Cost as defined in the SLA; no separate regional/phase caps are specified.
496	SLA Annexure	Cl. 4.0 — SLA Linked to Tool Accuracy Remedy/cure period before <85% accuracy "not acceptable" consequence applies	The tiered accuracy SLA imposes penalties from 5% to 10% of Implementation Charges for accuracy between 85-95%, with accuracy below 85% deemed "not acceptable." Kindly clarify the remedy/cure-period process before the "not acceptable" threshold triggers further consequences (e.g., payment withholding, right to terminate), and confirm whether the bidder is given a defined window to retrain/recalibrate models to restore compliance.	Below 85% accuracy is not acceptable until at least 85% is achieved. Model drift remediation timelines are separately specified, but no additional cure period for the accuracy penalty is stated.
497	SLA Annexure	SLA Item 3 — Network Latency	The data-ingestion latency SLA (95% within 2 min, 99% within 5 min) is stated as a single uniform target.	The stated latency SLA applies to critical real-time tags across the approved architecture.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		Differentiated latency thresholds by connectivity type	Kindly confirm whether this SLA applies identically across all connectivity types (cellular/M2M, existing SCADA infrastructure, VSAT/microwave backup), or whether OIL will apply differentiated thresholds given the inherently different latency characteristics of each connectivity medium.	Exclusions apply only for accepted reasons beyond bidder control.
498	SLA Annexure	Cl. 5.6 — Remote Site Connectivity SLA (≥99.0%/site/month) Penalty mechanism for connectivity-availability breach	Kindly clarify the specific penalty mechanism applicable when the ≥99.0% per-site monthly connectivity-availability SLA is breached, and how this interacts with (is additive to, or subsumed within) the overall 99.95% Solution Uptime SLA penalty framework.	Repeated remote-site connectivity breach is SLA noncompliance and attracts the applicable penalty under the existing P1/P2 framework, within the overall quarterly cap.
499	SLA Annexure	Cl. 6.0 — Escalation Procedure; Cl. 7.0 — Exclusions from Penalty Provisions Third-party telecom/ISP outages — penalty exclusion applicability	Kindly confirm whether outages caused by third-party telecom operators/ISPs (outside the bidder's direct control, e.g., cellular network downtime, MPLS/APN provider outages) fall under the "Exclusions from Penalty Provisions" (Cl. 7.0), given the SOW places overall connectivity-design responsibility on the bidder (Cl. 4.2.1.6).	Third-party telecom outages may be excluded only where services are outside bidder scope/control and the event is documented and accepted. Bidder-managed telecom failures remain attributable to the bidder.
500	Tender SOW – Technical	6.0 – Training; BOQ Items 43-45 Scope of software training —	Kindly confirm whether the 3 software-training batches (20 users each, per BOQ Item 43) include	Software training covers the DOF applications and tools specified in Section 6.2.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
	Specifications	SCADA/OPC/Historian admin vs. application end-user	SCADA-system, OPC-interface, and Historian administrator/configuration training, or are limited to application-level (PDMS/IPSM/AL/Well-Integrity/DOF dashboard) end-user training only, and confirm the training venue (OIL premises vs. bidder's facility).	Administrative/configuration training shall be sufficient for OIL personnel to operate and maintain the solution; venue is OIL premises after UAT.
501	Tender SOW – Technical Specifications	6.3 – Documentation; BOQ Item 46 Required documentation format/standard	For "technical documentation & knowledge transfer" (BOQ Item 46 — as-built docs, runbooks, source/config), kindly confirm the required documentation format/standard (e.g., ISA-5.1 P&ID conventions, IEC 62443 zone/conduit diagrams) for as-built docs, network architecture diagrams and SCADA configuration backups.	Documentation shall be delivered in PDF and native formats, in English, covering as-built drawings, configurations, runbooks, architecture and all specified artefacts. No additional format standard is prescribed.
502	Tender SOW – Technical Specifications	Sec 9.2 (Instrumentation Phase-1); Sec 5.0 (AMC) Warranty (1 year) vs. AMC (5 years) — concurrent or sequential	Instrumentation warranty is stated as 1 year from Go-Live (Sec 9.2, Pg 175), while the AMC period is 5 years from Go-Live (Sec 5.0, Pg 161). Kindly confirm whether the warranty and AMC run concurrently for the first year (with AMC services supplementing warranty coverage), or the AMC commences only after the 1-year warranty period	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			ends (i.e., a 1+5 = 6-year total support period).	
503	Tender SOW – Technical Specifications	5.0 – AMC Terms, Sl. No. 6 AMC troubleshooting liability — new vs. existing RTU/gateway hardware	Clause 5.0 (Sl. No. 6) makes the bidder responsible for troubleshooting gateway/edge-device/RTU issues during AMC. Since the existing ABB RTU hardware is neither supplied nor owned by the bidder, kindly clarify whether this obligation is limited to newly supplied hardware only, and whether OEM support/spares access for existing RTU hardware will be facilitated by OIL.	OIL will review and revert
504	Tender SOW – Payment Terms	AMC Payment — 4,000 man-hour/year cap (Years 2-5) Treatment of support requirement exceeding the annual cap	AMC Years 2-5 are capped at 4,000 man-hours/year for rate-card billing. Kindly clarify the process if actual support requirement in a given year exceeds 4,000 hours — whether additional hours are payable on a change-control basis, or the bidder must absorb any excess support requirement within the capped value at no additional cost.	OIL will review and revert
505	Tender SOW – Technical Specifications	4.2.14 / OMR 2017 reference PESO/CCOE approval — hazardous-area electrical equipment	For hazardous-area electrical equipment (transmitters, VFDs, actuated valves) deployed at oil installations, kindly confirm whether PESO (Petroleum and Explosives	Hazardous-area equipment shall comply with OMR 2017 and applicable statutory approvals. Required certification evidence shall be

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			Safety Organisation)/CCOE approval or certification is mandatorily required in addition to ATEX/IECEx, per Indian statutory requirements (OMR 2017, referenced at Pg 152), and clarify the approval-timeline implications for the project schedule.	submitted as specified; approval timelines remain bidder responsibility.
506	GCC	Cl. 24.0 – Customs Duty Import facilitation beyond duty concession	For imported SCADA/RTU/cloud-related hardware components, kindly confirm whether OIL will provide any import facilitation/end-use certificates beyond the customs-duty concession already referenced at Cl. 24.1, and the expected turnaround time for OIL to issue such certificates.	For eligible List-16 items, OIL will issue the requisite customs certificate/undertaking upon compliant request with at least 15 working days' notice. Other import formalities remain bidder's responsibility.
507	Tender SOW – Exit Management	Exit Management, Cl. 48-49 Data ownership & IP treatment for AI/ML models and proprietary algorithms	Clause 49 confirms OIL's ownership of "data generated upon usage" at any point during or after the contract. Kindly confirm this specifically extends to raw SCADA/RTU tag data, historian data, and AI/ML model outputs, and separately clarify the treatment of the bidder's proprietary algorithms/AI models embedded within the solution upon contract exit — i.e., whether these remain bidder IP (with OIL	All data generated through the solution belongs to OIL. Demobilization requires handover of source code, repositories, models, artefacts and documentation, and no data/models/artefacts may be retained by the bidder post-exit.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			granted a perpetual usage license) or must be transferred/escrowed to OIL.	
508	5.0 ANNUAL MAINTENANCE – TERMS & CONDITIONS	4.2.23 4. Bidder shall quote for AMC of the DOF platform and the same will be considered for evaluation.	Could you please confirm whether this contract will be offshore or onshore, Else in both platform?	The scope is for OIL's onshore operational areas in Assam, Rajasthan and Arunachal Pradesh. No offshore platform is identified.
509	5.0 ANNUAL MAINTENANCE – TERMS & CONDITIONS	5 29. Bidder needs to ensure AMC will include preventive as well as corrective maintenance of deployed solution.	How many Periodic Maintenance and Corrective Maintenance activity may required per year	The tender does not prescribe a fixed number of preventive/corrective maintenance activities. Preventive maintenance follows OEM/OIL schedules; corrective maintenance is as required to meet SLA.
510	5.0 ANNUAL MAINTENANCE – TERMS & CONDITIONS	5 44. 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	1. 2nd Year onward how to calculate the Materials and part price is it include in AMC rate as CAMC? 2. If CAMC, Please confirm whether consumable items (e.g., batteries, fuses, protectors, cables, connectors, etc.) are also required to be replaced free of cost during the AMC period. 3. In case an OEM discontinues a hardware model during the AMC period, will the bidder be allowed to	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		and tear - shall be repaired or replaced by the bidder at no additional cost to the Client.	provide an equivalent or upgraded replacement model?	
511	5.0 ANNUAL MAINTENANCE – TERMS & CONDITIONS	PART-4 SECTION-IV SCHEDULE OF RATES (SOR) 17, 18,19, 20 AMC - rate card for actual consumption (enter notional annual value; will be paid on actuals) Manhour 4000	1.Kindly confirm whether the quoted scope(4000Hrs) includes both locations (Duliajan and Jodhpur) ? Or for single location 2.Two resident engineers is for each location ?or one engineer for One location ?	OIL will review and revert
512	Annexure-A	Annexure-A (Sensorization of 380 Wells)	Please provide the details of Existing controller available/installed for each type of wells (Self Flow, Gas Lift wells, SRP, ESP, Plunger Lift Wells). OIL to confirm that Warranty and any Maintenance contract for these existing systems/hardware are available from respective OEM as necessary.	Existing controller make/model and interface details are not provided and shall be shared/assessed during detailed engineering and site survey. The tender does not confirm existing OEM warranty/AMC coverage; bidder shall integrate and support the complete solution as specified.

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QUERIES FROM PARTY-H

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**Scope of Work**	4.1 The DOF shall use real-time IoT data, AI/ML and advanced analytics to optimize well performance, enable predictive maintenance, and improve hydrocarbon recovery.	Please confirm that bidders may propose a fit-for-purpose combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
2	**BEC**	BEC 2.1(A) Note (i); 4.1; 4.1.5; 4.2.9; SOR Items 7 and related TOR AI-based Digital Well Integrity Management is included in the qualification criteria, solution scope, technical requirements and BOQ.	Bidder believes AI-based Digital Well Integrity Management (DWIM) should be treated as a specialized domain solution rather than a component of the Digital Oilfield (DoF) due to differences in objectives, data requirements, regulatory implications, and implementation complexity. The primary focus of DoF is real-time production optimization, surveillance, and operational efficiency, leveraging high-frequency operational data. In contrast, well integrity management is a risk, compliance, and asset assurance function, driven by low-frequency inspection data, event-based diagnostics, barrier validation frameworks, and regulatory reporting requirements. Integrating DWIM into DoF would introduce significant scope expansion and complexity, as it requires: - Dedicated workflows for barrier management, failure modes, and risk classification (API/ISO standards)	The tender scope remains unchanged. AI-based Digital Well Integrity Management is an integral DOF module under Clauses 4.1.5 and 4.2.9 and BOQ Item 7

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			- Integration of inspection logs, intervention history, well schematics, and compliance records, which are typically outside the historian ecosystem - Advanced AI/ML models requiring curated long-term datasets rather than real-time streaming data From an architectural standpoint, DoF platforms are optimized for real-time decision support and closed-loop optimization, whereas DWIM systems function as long-cycle analytical and governance platforms. Combining the two would (1) Dilute the primary value proposition of DoF (production optimization and surveillance) (2) Introduce data ownership and validation challenges across integrity, HSE, and operations teams (3) Delay implementation timelines due to additional integration with non-operational systems (inspection databases, document systems) (4) Increase regulatory risk exposure, as integrity systems require stricter validation, auditability, and compliance	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			traceability Industry best practice is to maintain a loosely coupled architecture, where: DoF consumes integrity status indicators or constraints (e.g., max allowable pressure, tubing limits) DWIM operates as an independent system of record for well barrier health, failure prediction, and compliance Including AI-Based Digital Well Integrity Management within the DoF scope is not recommended, as it represents a different functional domain (asset integrity vs production optimization), requires distinct data ecosystems and governance models, and would increase project complexity without proportionate benefit to DoF objectives. A decoupled but interoperable approach ensures both systems deliver value effectively without compromising scope, timeline, or accountability. Thus Bidder requests to decouple AI based digital Integrity management from DoF scope.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**Scope of Work**	4.1.1; Annexure-A To enable optimisation at well head level, VFD and dynamometer will be required at selected SRP wells.	Bidder understands that, global/ overall production optimization will encompass all the 700 wells considered under this DoF scope. Thus, VFD and dynamometer will be required for all SRP wells and not selected once. Please confirm if bidder understanding is correct.	The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the physics-based reference model, well-performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by EDGE for autonomous artificial-lift optimization.
4	**Scope of Work**	4.1.1-4.1.3; 4.2.1.1-4.2.1.7; Note 2 under 4.2.26 All the data from the well heads (existing & upcoming sensors as provided in Annexure-A) will be transmitted to OIL's OT Datalake (on-prem private cloud) via wireless connectivity through wireless gateways.	Please confirm if OT datalake is On-Prem or on cloud and it's physical location, type OSI PI etc? If on-prem datalake is available; PDMS solution can reside on same server as that of central datalake and cloud based dashboard can be made available for users. Please confirm the approach.	The OT Data Lake is on-prem and will be provided by OIL. The DOF deployment shall comply with the architecture, interfaces and hosting requirements under Clauses 4.2.1.1 to 4.2.1.5

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Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**Scope of Work**	4.1.2; 4.2.3-4.2.3.3 The PDMS software will source existing real time data from the L2 historian at FHQ and enable data consolidation from various teams – surface, sub surface, chemical, reservoir, reserves etc. via automate or manual inputs.	PDMS system shall be designed considering necessary real time operational data. Cross-functional inputs (surface, subsurface, chemical, reservoir, reserves, etc.) are non-real-time and contextual in nature, and do not require dedicated integration pipelines at the DoF level. Forcing additional system integrations would increase project complexity, introduce data ownership ambiguities, and delay value realization. Existing cross-functional systems should continue to act as systems of record, while PDMS serves as the analytics, surveillance, and decision-support layer. Thus to avoid duplication of data pipelines, maintain clear data ownership and governance, reduce the integration risk and project complexity in alignment with standard DoF architecture best practices; bidder requests removal of additional cross-functional data incorporation from DoF scope. Bidder requests to re-phrase the text to	The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			"The PDMS software will source existing real time data from the L2 historian at FHQ and other sources as necessary."	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**Scope of Work**	4.1.3.4; 4.1.4.2.3; 4.1.4.3.2-4.1.4.3.4; 4.2.1.1; 4.2.1.6; 4.2.6; 4.2.7 Implementation of fail-safe shut down logic for gas lift wells.	Please elaborate on this requirement. Bidder understands that fail-safe shut-down logic, ESD logic is already in place for existing operational wells. Fail-safe shut-down logic, ESD logic for upcoming new wells shall be provided by the client. Design, configuration of these logics, well design is not considered in bidder's scope. Please confirm.	The bidder shall implement fail-safe shutdown logic for gas-lift wells as specified. Control execution shall remain at L3 or below/field RTU, PLC or edge controller within OIL OT Zone
7	**Scope of Work**	4.1.4; 4.2.1.1; 4.2.7 The solution shall allow users to modify and update various input parameters such as gas lift injection rates, wellhead pressures, temperatures, flow regimes, pump performance parameters, reservoir parameters (PI, GOR, Water cut, etc.) as per field conditions and allow to run multiple optimization scenarios for improved field recovery and production from the field.	Only independent parameters can be modified in the simulation models. Override functionality can be provided to platform admins/ approvers.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**Scope of Work**	4.1.4.1; 4.2.5; 4.2.13.10-4.2.13.11; Annexure-A The solution implemented shall monitor and control existing Rod Lift wells that are not monitored and controlled remotely.	What about the wells that already have monitoring, control and optimization functionality. Please elaborate on integration requirements if any. Please provide details (vendor, current configuration, as-is status, etc) about the wells that already has monitoring and control solution available. Tender document also specifies that, SRP wells should be controlled, optimized locally. In that scenario please clarify the requirement of remote control.	All SRP/Rod Lift wells to be automated with load cell, Dynamometer & EDGE devices and shall be integrated with the DOF platform. Local autonomous control and remote monitoring/decision support shall comply with Clauses 4.2.1.1 and 4.2.5. Bidder is advised to visit sites for exact assessment
9	**Scope of Work**	4.1.4.2; 4.2.1.1; 4.2.6 The solution shall integrate plunger lift optimization into a broader artificial lift control framework, enabling coordinated operation with lift-gas systems and shared surface infrastructure where applicable.	Please elaborate on broader integration requirements with global optimization, if the solution provided for each well is local optimizer. Please clarify the required coordination boundary between individual-well control and field/network-level optimization, including shared facility constraints, decision frequency, control hierarchy, and the approved mechanism for implementing optimum set points obtained via global optimization.	Coordination shall cover shared lift-gas and surface-infrastructure constraints. Optimization may be centralized, but control execution shall remain at L3 or below as specified in the tender

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Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**Scope of Work**	4.1.4.2.4-4.1.4.2.7; 4.2.1.1; 4.2.6 Closed-loop local plunger control, progressive automation and remote monitoring/operations requirements. The solution shall implement closed-loop plunger lift control, where cycle execution is governed by real-time measurements, energy-based lift qualification, and adaptive decision logic rather than fixed schedules or static rules. - 4.2.1.1 Control Commands	Please confirm the intended control hierarchy and precedence between local adaptive cycle control and centralized global optimization. Individual well by well optimization will provide local optima for that particular well which may not be truly achievable on the field and will defeat the purpose of optimization. Global optimization based on operating profitability represents the true optimum for a production network because wells do not operate independently. In a field comprising naturally flowing wells, Continuous Gas Lift (CGL), Intermittent Gas Lift (IGL), Plunger Assisted Gas Lift (PAGL), Sucker Rod Pumps (SRP), and ESP wells, all wells compete for common resources and are coupled through surface network constraints such as separator capacity, liquid handling limits, gas compression capacity, power availability, water disposal capacity, and flowline backpressure. A well-by-well optimization approach identifies the local optimum for each individual well. However,	The proposed approach shall comply with the tender hierarchy: cloud/L4-L5 provides advisory recommendations only, while autonomous control executes locally at L3 or below. Field-wide constraints shall be considered where specified. Well-by-well optimization in isolation may identify a local optimum for an individual well in an integrated production system, wells are interdependent and compete for common resources and surface facilities. Accordingly, for a field comprising naturally flowing, CGL, IGL, PAGL, SRP and ESP wells, the DOF solution shall recognize the interaction among wells and constraints such as separator capacity, liquid-handling capacity, gas compression/lift-gas availability, electrical power, water handling/disposal capacity, flowline/network pressure and other facility constraints. The intended optimization hierarchy is envisaged as follows: 1. Centralized Global

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			simultaneous operation of all wells at their respective local optima rarely results in the maximum economic value for the overall asset. Global optimization evaluates the entire production system and allocates constrained resources to maximize total field operating profitability, considering revenue from incremental hydrocarbon production and the associated operating costs, including lift gas consumption, power consumption, water handling, equipment degradation, and operational risks. Consequently, global optimization identifies the resource allocation and operating strategy that delivers the highest overall economic return rather than merely maximizing production from individual wells. This approach yields the true field-wide optimum and frequently produces higher net asset value than independent well-level optimization. PLease confirm bidder understanding and approach is acceptable.	Optimization: The centralized optimizer shall determine the field-wide optimum operating strategy and resource allocation based on the overall production-system objective, preferably incorporating operating profitability/economic value rather than simply maximizing individual well production. 2. EDGE-Based Autonomous/Local Optimization: The EDGE device shall provide autonomous/adaptive optimization at the well or local asset level, using real-time measurements, well behaviour and operating constraints to continuously adjust the applicable lift/control parameters. The EDGE-based optimizer shall operate within the operating targets, constraints and resource allocation established by the global optimizer. 3. Coordination Between Global and EDGE Optimization: Where the locally determined optimum differs from the field-wide optimum, the global

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				optimization objective and resource allocation shall take precedence, while the EDGE device shall optimize the individual well's operation within the permissible operating envelope assigned to it. The global optimization should consider, as applicable, incremental hydrocarbon revenue and associated operating costs, including lift-gas consumption, power consumption, water handling, equipment degradation/operational constraints and other relevant economic penalties, to determine the optimum operating strategy for the integrated production system.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
11	**Scope of Work**	4.1.4.3.3-4.1.4.3.4; 4.2.3.1; 4.2.10- 4.2.11; Note 3 under 4.2.26; SLA 1-4 The solution shall provide autonomous model calibration	Automatic simulation model calibration is not accepted, as it would defeat the purpose of operational anomaly detection by continuously forcing the model outputs to match the current plant behavior, including any abnormal conditions. Calibration is a discrete, offline activity that should only be performed when model drift has been identified, investigated, and confirmed. Maintaining a calibrated but independent model is essential to ensure meaningful comparison between expected and actual performance, thereby enabling reliable detection of process deviations and operational anomalies. Please confirm bidder understanding and approach is acceptable.	The tender requires autonomous model calibration and controlled model-drift management. Model changes/retraining shall be monitored, validated, approved and deployed as specified in Clauses 4.2.26 and the SLA.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**Scope of Work**	4.1.4.3.4 Key Optimization and Automation Features	This section is primarily automation requirements- activities that are generally performed from field or regional control room. Please confirm if these functionalities are required in DoF platform which is located centrally away from the actual field?	Yes. The specified monitoring, optimization and automation functions are required under the DOF scope. Safety-critical and autonomous control shall execute only within the approved OT control environment at L3 or below.
13	**Scope of Work**	4.1.7; 4.2.11; SOR Items 9 and 41 Develop a physics-based transient or dynamic model, multiphase digital model of wells, surface networks and gas lift network modelling, reservoirs, lift systems, and production facilities, capturing true operating conditions across the field.	Please confirm that bidders may propose a fit-for-purpose combination of first-principles steady state / dynamic simulation, AI/ML and advanced analytics, selected according to the use case, data availability and required performance outcomes.	The bidder shall comply with Clauses 4.1.7 and 4.2.11. The IPSM shall include the specified transient/dynamic multiphase, flow-assurance and real-time integration capabilities.
14	**Scope of Work**	4.1.7.1 The solution shall enable dynamic multiphase simulations with full operational constraints, sensitivities, and what-if scenario analysis.	Bidder requests to re-phrase the text to "The solution shall include first-principles base multiphase simulations with capability to include operational constraints to perform sensitivities, and what-if scenario analysis."	The tender clause remains unchanged.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**Scope of Work**	4.1.7.3 Provide clear visualization of asphaltene precipitation risks supporting preventive operations and informed decision-making.	Please confirm the requirement of Asphaltene modelling	Asphaltene-risk visualization is required under Clause 4.1.7.3. The necessary requirements for visualizing asphaltene precipitation risks shall be discussed and finalized during the detailed engineering stage.
16	**Scope of Work**	4.2.1.7(A); 4.2.3; 10.0; SOR Item 14 The platform shall support 180 concurrent authenticated users, while BOQ Item 14 specifies 150 web-application users.	Please confirm the concurrent authenticated users required.	OIL will review and revert
17	**Scope of Work**	4.2.7.1 AI/ML optimization with retrainable models supporting what-if analysis for gas-injection scenarios.	Please confirm that gas-lift optimization may be delivered using physics-based, data-driven or hybrid methods, provided the proposed solution meets the functional, performance, explainability and validation requirements.	Gas-lift optimization shall be implemented as an EDGE-enabled autonomous optimization capability, employing the specified hybrid optimization approach combining physics-based models with AI/ML-driven data analytics. The solution shall satisfy all specified functional, performance, explainability, validation, operational safety and reliability requirements, and shall demonstrate that optimization recommendations/actions are technically valid, operationally feasible, and consistent with the

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				defined well and field operating constraints. under Clauses 4.1.4.3 and 4.2.7.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**Scope of Work**	4.2.8; SLA 3-5; Payment Milestones 3-6 ESP KPI/acceptance targets and general tool accuracy/penalty provisions. • KPIs & acceptance: o Reduction in PI excursions outside band ≥30%. o Energy intensity improvement ≥5% (kWh/bbl.) without loss of liquid rate. o Accurate early-warning for gas lock events with precision ≥80% / recall ≥80% on validated events.	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	The acceptance KPIs stated in Clause 4.2.8 remain applicable. Model validation shall use OIL-approved datasets and scenarios, with dependencies handled as provided in the SLA exclusions.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
19	**Scope of Work**	4.2.10; SLA 3-5; Payment Milestones 3-6 VFM MAPE targets, tool-accuracy SLA and related acceptance provisions. • Accuracy targets (acceptance): o Oil & water rate MAPE ≤10–15% on validation wells; gas rate MAPE ≤15–20% (targets adjustable per well class).	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	The VFM accuracy targets in Clause 4.2.10 remain applicable. Validation, recalibration and drift management shall use available well-test/reference data and approved procedures.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
20	**Scope of Work**	4.2.10; Note 3 under 4.2.26 Automatic VFM refit/retraining when model drift exceeds threshold, with administrator approval and drift-management limits.	Please confirm that VFM drift may be managed through automated monitoring and notification followed by administrator-approved recalibration or retraining, validation and controlled deployment.	Confirmed. VFM drift shall be monitored automatically, with administrator-approved recalibration/retraining, validation, controlled deployment and retained change logs
21	**Scope of Work**	4.2.11; SOR Item 9 Multiphase Simulation Engine: Transient multiphase flow modelling in wellbore + surface network + flow assurance for Dynamic digital model of reservoir, wellbore, surface network, facilities reflecting real physics and operational constraints.	Please confirm that the IPSM requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling across reservoirs, wells, lift systems, networks and facilities, based on approved use cases and required functionality.	The IPSM shall meet the transient multiphase and dynamic modelling requirements of Clauses 4.1.7 and 4.2.11. Any proposed combination must fully satisfy the specified use cases and acceptance criteria
22	**Scope of Work**	4.2.11; SOR Item 9 Accurate handling of transient multiphase flow, thermodynamics & Wax and hydrate kinetic mechanisms, Pipeline roughness and scale buildup effects.	Please confirm that the requirement may be met using a fit-for-purpose combination of steady-state and transient/dynamic multiphase modelling, based on approved use cases, required functionality and data availability.	The requirement remains as specified in Clause 4.2.11, including transient multiphase flow, thermodynamics, wax/hydrate kinetics, roughness and scale effects

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Sl. No.	Section	Clause Reference	Query	OIL's Response
23	**Scope of Work**	4.2.12; AMC Item 34; SOR Items 10-12 The bidder shall do the integration with Command & Control Center (CCC) for showcasing the dashboards including all the wells parameters.	Please elaborate the integration requirements. Please provide the CCC architecture, hosting location, approved interfaces, cybersecurity requirements, data refresh rates, tag/KPI list, dashboard standards, user roles and responsibility split for design, licensing, deployment, testing and ongoing support.	CCC integration and dashboards are in bidder scope. Detailed interfaces and API specifications will be made available during detailed engineering under the CCC scope

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Sl. No.	Section	Clause Reference	Query	OIL's Response
24	**Scope of Work**	4.1; 4.2.12 Note; SOR Items 7-10; Payment Note for Migration 4.1 Additionally, the software solution shall impose no limitations on onboarding any future wells, and such additions must be accommodated without any extra cost to OIL. 4.2.12 Note: The bidder must ensure that the solution remains fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications beyond the contracted value.	Please define the maximum number of additional wells to be onboarded during the contract, together with the required modules, instrumentation, integrations. **Please confirm that additions beyond the stated baseline will be managed through the contract change-control mechanism**. **Maximum number of well addition to be capped to +/- 2%. Any well that is shut-in, suspended, or otherwise non-producing during the implementation or contract period shall not be considered replaced by a newly added well. All newly commissioned wells shall be counted as additional wells for scalability purposes. The quoted scope is based on the contracted well count with an allowable variation of ±2%. Any increase beyond this threshold shall be managed through a mutually agreed change order/work order mechanism and compensated separately.**	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
25	**Scope of Work**	Forwarding Letter item (o); 9.0-9.3; SCC A.4; SLA 3.0; Payment Milestones Software Implementation/Maintenance Timeline	Given the complexity and scale of the proposed Digital Oilfield / optimization program, we request clarification on the feasibility of the stipulated 11-month project timeline. Based on industry experience, key activities such as data consolidation and conditioning from multiple systems (e.g., historian, SCADA), development and calibration of physics-based/hybrid models, integration with existing IT/OT infrastructure, and deployment of analytics and optimization layers typically require iterative execution and validation. Additionally, dependencies related to data quality, system interfaces, cybersecurity approvals, and site acceptance testing introduce inherent schedule uncertainties. Compressing these interdependent activities into an 11-month period poses significant risks to solution robustness, model accuracy, and overall delivery quality. Industry best practices indicate that end-to-end implementation typically spans 36-48 months to ensure sustainable performance and	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			measurable outcomes. In view of the above, we request the Client to consider revising the overall project duration to 48 months, to enable effective deployment, integration, and long-term value realization.	

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Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**Scope of Work**	4.2.1.7(A) and (C); 10.0; SOR Items 9 and 14; Payment Milestones The platform shall support 180 concurrent authenticated users and at least five concurrent user-initiated simulation/what-if runs.	Please clarify whether the requirement for five concurrent simulation/what-if runs is an aggregate platform limit or a per-user entitlement. Please confirm the required number of named and concurrent simulation users, user locations, modules to be accessed and licensing basis.	The requirement is an aggregate platform capability of at least five concurrent OIL-approved user-initiated simulation/what-if runs. User access will follow the approved access model.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
27	**Scope of Work**	4.2.10 Configurable execution frequency (1-min / 5-min / hourly / daily)	The VFM execution frequency shall be finalized mutually during the implementation phase based on field data quality, measurement update rates, communication infrastructure, and operational requirements. 1-minute or 5-minute execution interval is generally not recommended as measurement noise, data latency, instrument uncertainty, and process stabilization requirements may adversely affect the reliability and robustness of flow estimates. The optimal calculation frequency will therefore be established jointly during detailed design to ensure an appropriate balance between responsiveness and prediction accuracy. Please confirm bidder understanding and approach is acceptable.	Execution frequency shall be configurable at 1-minute, 5-minute, hourly and daily intervals as specified in Clause 4.2.10

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Sl. No.	Section	Clause Reference	Query	OIL's Response
28	**Scope of Work**	5.0-2 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.	**Please confirm the pricing that will be considered for bid evaluation.**	The quantities stipulated in the BOQ/Price Bid format shall be considered for Bid Evaluation.
29	**Scope of Work**	5.0-3 During Hypercare, bidder to provide application managed services by the implementation team.	Please define hypercare period timeline.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
30	**Scope of Work**	4 SLA LINKED TO TOOL ACCURACY	Solution/ Model accuracy depends on the data quality, frequency and availability of the required measured parameters. During initial phase of the project implementation, bidder would request for the necessary data (i.e historical data, lab analysis or any other necessary tests results). Upon discussion and agreement with the Client, a specific set of historic data would be chosen covering desired operating envelope for the model building activity. The acceptable tolerances for the model then needs to be discussed and agreed with the client upon review of the available data considering data quality and frequency of data collection. Upon implementation of the solution(i.e. post Go-Live), Bidder would work with the OIL to enhance the model performance subject to availability of the quality data within selected operating envelope. Client to please confirm above if understanding is correct and specified approach is acceptable.	The tool-accuracy SLA and tiered penalties under SCC Clause B.4.0 remain applicable. Approved data dependencies may be considered only in accordance with the SLA exclusions

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QUERIES FROM PARTY-I

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.(vii)Integrated production system modelling (IPSM) (a)Well Performance Model (b)Wax & Hydrate Deposition Prediction Modelling (c)Surface Network Analysis & Optimization	As per BEC (Bid Evaluation Criteria) Clause 2.1, the definition of similar work under IPSM scope also includes Material Balance Reservoir Modelling. Accordingly, we understand that a multi-tank material balance model for the reservoir is also required as part of the IPSM scope. **We request OIL to kindly confirm whether our understanding is correct.** In addition, considering that a significant portion of the field comprises IGL-based wells and the reservoir is being represented using a material balance approach, we understand that incorporating **a dynamic reservoir model would be beneficial** for accurately capturing and analysing the reservoir–wellbore interaction, particularly the liquid rise behaviour within the tubing. This would enable the model to better replicate the actual field behaviour and support appropriate analysis and optimization.	The IPSM scope includes Material Balance Reservoir Modelling, Well Performance Modelling, Surface Network Modelling & Optimization, and Wax & Hydrate Prediction Modelling. The solution shall comply with the physics-based/dynamic/transient modelling requirements specified in the tender. The IPSM shall incorporate an integrated reservoir material-balance model, capable of assimilating validated historical and real-time/near-real-time production, pressure, injection and PVT data. The reservoir model shall be periodically updated and history matched to generate dynamic forecasts of reservoir pressure, fluid production, water influx, GOR, water cut, depletion and recovery. These reservoir forecasts shall be automatically/periodically interfaced with the integrated well and surface-network model to evaluate future well and field production under prevailing

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				reservoir, artificial-lift, network and facility constraints for all 700 wells.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
2	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.2 Production Data Management System: Production Data Management System (PDMS) will enable a single source of truth for production related data. The system will be interface with various databases – OT data lake, SCADA, Historian, GRPC, RTPMA. The PDMS software will source existing real time data from the OT data lake at FHQ and enable data consolidation from various teams – surface, sub surface, chemical, reservoir, reserves etc. via automate or manual inputs. PDMS will also enable role-based production surveillance & alarms & notifications for exceptions will be enabled for various Asset teams.	We request OIL to kindly specify the data integration protocols/interfaces required for integration with the systems and databases covered under the PDMS scope, including whether protocols such as OPC UA, REST API, MQTT, ODBC/JDBC, Web Services, or any other specified standards are to be used. This clarification will help bidders assess the required integration architecture and implementation efforts.	The bidder shall interface PDMS with the systems specified in the tender. Detailed OT Data Lake sizing, retention, performance requirements and API specifications will be made available during detailed engineering under the CCC scope

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Sl. No.	Section	Clause Reference	Query	OIL's Response
3	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.7.1 Integrated Digital Modelling : Develop a physics-based transient or dynamic model, multiphase digital model of wells, surface networks and gas lift network modelling, reservoirs, lift systems, and production facilities, capturing true operating conditions across the field.	We understand that a Dynamic Model should suffice for the IPSM scope, as transient behaviour is expected to be monitored and addressed through the respective Edge devices and their integration with the DOF. Further, IPSM is primarily intended for mid- to long-term optimization and planning, rather than real-time decision-making, for which Edge devices are being deployed under the tender. Accordingly, we request OIL to kindly confirm whether our understanding is correct that: 1.IPSM is required to use Dynamic Modelling with a daily timestep, without the need to model transient behaviour. 2.IPSM should support short-term decision-making/planning over a period of approximately one month, as well as long-term planning over 15+ years. 3.The long-term planning capability should include scenarios such as pipeline replacement, field development studies, and addition or deletion	The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population. The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the

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Sl. No.	Section	Clause Reference	Query	OIL's Response
			of wells and facilities from the network.	physics-based reference model, well-performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by EDGE for autonomous artificial-lift optimization. The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities. This integrated approach shall

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				ensure that well-level autonomous optimization does not result in sub-optimal field-level performance, thereby enabling coordinated and constraint-aware artificial-lift optimization across the 700-well population.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.7.1Integrated Digital Modelling Model shall integrate reservoir characteristics, completion data, artificial lift performance, and process equipment constraints to reflect realistic field behavior.	We request OIL to kindly clarify the requirement for integrating reservoir characteristics. **As per our understanding, the model shall incorporate reservoir characteristics through a multi-tank material balance model for the reservoir.** Kindly confirm whether this understanding is correct.	Material Balance Reservoir Modelling is included in the IPSM scope. The model shall integrate reservoir characteristics with completion data, artificial-lift performance and process-equipment constraints to reflect realistic field behaviour.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.7.3: Flow Assurance: The solution shall consider providing flexibility for users to perform necessary cooldown time simulations by selecting options of a fixed target temperature, min-max hydrate and wax temperature (estimated by the solution) or fixed time.	We request OIL to kindly clarify what is meant by cooldown time simulations. Does this mean that WAX, Hydrate phase envelope to be generated and its response against the present condition to be flagged?	Cooldown-time simulation shall assess the thermal response during shutdown/cooldown using selectable criteria such as fixed target temperature, estimated minimum/maximum wax and hydrate temperatures, or fixed time, to support wax/hydrate risk evaluation. Cooldown Time Calculation: The system shall calculate and report the available shutdown duration before any selected pipeline, flowline reaches a user-defined critical temperature limit (hydrate, wax formation).The calculation shall account for compositional fluid properties, heat transfer effects, environmental conditions, and operating parameters, and shall support flow assurance assessments related to hydrates, wax operability. Cooldown analysis should consider a thermo-hydraulic flow assurance assessment rather than a simple temperature-decay calculation.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.11 Integrated Production System Modelling (IPSM) Multiphase Simulation Engine: Transient multiphase flow modelling in wellbore + surface network + flow assurance for Dynamic digital model of reservoir, wellbore, surface network, facilities reflecting real physics and operational constraints.	As per this clause, Transient Multiphase Flow Modelling appears to be required, which seems contradictory to Clause 4.1.7.1 (Integrated Digital Modelling), where a Dynamic Model can also be delivered. As per our understanding, Dynamic Modelling should suffice, as transient behaviour is already being monitored and covered through the respective edge devices and their integration with the DOF. We request OIL to kindly confirm whether Dynamic or transient Modelling can be considered in lieu of Transient Modelling. We also request OIL to clarify whether Reservoir Modelling is included in the scope. As per our understanding, a Multi-Tank Material Balance Model for the reservoir is also required. Kindly confirm whether this understanding is correct.	Oil will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
7	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.11 Integrated Production System Modelling (IPSM) Multiphase Simulation Engine: Accurate handling of transient multiphase flow, thermodynamics & Wax and hydrate kinetic mechanisms, Pipeline roughness and scale buildup effects.	With respect to scale build-up effects, we understand that OIL will provide the scale intensity/rate, based on which the proposed solution shall be able to model and assess the impact of scale formation on the system. We request OIL to kindly confirm whether this understanding is correct.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.11 Integrated Production System Modelling (IPSM) Well-level accuracy KPIs (MAE/MAPE), model updates tracked with approval workflows.	We request OIL to kindly define the well-level KPIs and the corresponding acceptance criteria, as presently is very open and we are not able to define the service hours required for the same placed below is suggested format for KPI to remove the ambiguity from scope. Please refer to the below format: With respect to MAE/MAPE, based on our experience in deploying DOF solutions, we understand that a MAPE of 20% for oil, water, and gas rates would be an appropriate benchmark. Kindly confirm whether this may be considered as the applicable acceptance criterion.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
9	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.11 Integrated Production System Modelling (IPSM) Real-time ingestion of wellhead data, choke settings, facility pressures and temperature	We understand that IPSM is primarily intended for mid- to long-term optimization rather than real-time decision-making, while the required real-time analysis and monitoring are addressed through the respective edge devices and their integration with the DOF. Our understanding is IPSM dynamic model to run at daily frequency with the ingestion of real time data to benchmark of current parameters vs most optimized scenario.	The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population. The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				physics-based reference model, well-performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by EDGE for autonomous artificial-lift optimization. The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities. This integrated approach shall

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Sl. No.	Section	Clause Reference	Query	OIL's Response
				ensure that well-level autonomous optimization does not result in sub-optimal field-level performance, thereby enabling coordinated and constraint-aware artificial-lift optimization across the 700-well population.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
10	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.12 Visualization, Reporting & Decision Support : Dashboards: Real-time tiles, performance ranking, map, alarm wall, and drill-downs with overlay of setpoints, states, and workovers. The bidder should provide dashboards as per requirement during implementation and post implementation phase. The bidder shall do the integration with Command & Control Center (CCC)for showcasing the dashboards including all the wells parameters.	The bidder shall undertake integration with CCC within the agreed DOF implementation schedule, subject to OIL providing the required integration protocol/interface details in a timely manner. Any integration activity or effort required beyond the agreed implementation timeline, or arising due to changes/clarifications in the integration protocol, shall be considered outside the defined scope of work and treated as a separate change request,	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
11	**PART-4 SECTION-IV SCHEDULE OF RATES (SOR)**	9 Integrated Production System Modelling (IPSM) – transient multiphase + flow assurance	We request OIL to kindly confirm, as also mentioned under Clause 4.1.7.1 (Integrated Digital Modelling), whether a Dynamic Model can be delivered in lieu of a Transient Model. As per our understanding, Dynamic Modelling should suffice, as the transient behaviour is already being monitored and covered through the respective edge devices and their integration with the DOF.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**PART-4 SECTION-IV SCHEDULE OF RATES (SOR)**	9 Integrated Production System Modelling (IPSM) - transient multiphase and flow assurance Physics-based transient multiphase modelling of reservoirs, wells, lift systems, surface networks and facilities, including what-if simulation, network optimization, wax/hydrate/asphaltene risk, flow assurance, bottleneck identification, model governance and realtime integration.	**We request OIL to kindly clarify whether Reservoir Modelling is included in the scope.** As per our understanding, a **Multi-Tank Material Balance Model for the reservoir is also required.** Kindly confirm whether this understanding is correct.	Yes. Material-balance-based reservoir modelling shall form an integral component of the IPSM scope, with seamless integration with physics-based modelling of the wells, artificial-lift systems, surface gathering networks, and production facilities to establish a fully coupled, field-wide integrated production-system model.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
13	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.2 Production Data Management System: Production Data Management System (PDMS) will enable a single source of truth for production related data. The system will be interface with various databases – OT data lake, SCADA, Historian, GRPC, RTPMA. The PDMS software will source existing real time data from the OT data lake at FHQ and enable data consolidation from various teams – surface, sub surface, chemical, reservoir, reserves etc. via automate or manual inputs. PDMS will also enable role-based production surveillance & alarms & notifications for exceptions will be enabled for various Asset teams.	We kindly request OIL to please elaborate on what type of alarm is required "Production surveillance and alarm".	Need not to duplicate alarms coming from scada only workflow related alarms needs to be considered.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.3 Production Data Management System •Integration of PDMS with SCADA (through OT Data Lake), Well Head monitoring System, RTPMA (Real Time Production Monitoring and Analysis), GRPC and other systems as required.	We kindly request OIL to clarify the number of existing systems that are required to be integrated with the PDMS. Additionally, we request OIL to provide details of the communication protocols, interfaces, and data exchange standards intended to be used for integration with each system. This information will enable bidders to accurately assess the integration scope and submit a comprehensive and compliant proposal. Further, as per our understanding, the integration with the existing systems is intended solely for read-only data ingestion into the proposed solution, without any requirement for write-back to the source systems. Kindly confirm whether our understanding is correct. Please provide available details of the existing RTUs, PLCs, SCADA systems, communication protocols, firmware versions and interface requirements to enable accurate integration design and effort estimation.	PDMS integration shall cover OT Data Lake, existing SCADA, Well Head Monitoring System, RTPMA, GRPC, historian, SAP S/4HANA and other in-scope systems. Supported interfaces include OPC UA, MQTT 3.1.1/5.0 and REST. Existing RTU/modem details will be shared during detailed engineering. approved autonomous control executes locally at Level 1/1.5. General data flow Field data>SCADA>OT Datalake>PDMS. Final data flow architecture will be confirmed during detailed design.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.3.1 Well Test Validation Automatically update simulation models with validated well test data, alert end users in case of model-match anomalies and enable the end users to either calibrate the model or approve/reject the well tests from the common interface.	We kindly request OIL to clarify the scope of simulator integration. Specifically, please confirm the location of the simulation model, the simulation software currently in use, and whether bidders are required to provide/develop the simulation model or only facilitate direct integration between the existing IPSM and PDMS. Further, we suggest that well test validation should remain within the IPSM scope, while the PDMS scope should be limited to integration with the IPSM and consumption of the validated well test model outputs.	The bidder shall provide the IPSM models and integrate them with PDMS. PDMS shall validate well-test data, use approved well models/performance curves or choke models, automatically update simulation models with validated tests, flag model-match anomalies and enable users to calibrate or approve/reject tests through the common interface.
16	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.1.2 Production Data Management System: The system will be interface with various databases – OT data lake, SCADA, Historian, GRPC, RTPMA	We kindly request OIL to clarify the intended integration architecture between the PDMS, OT Data Lake, SCADA, and Historian systems, including the expected data flow between these systems and identification of the designated system of record for production data.	Field devices shall transmit through existing SCADA to the OIL-provided on-prem OT Data Lake, from which PDMS/DOF applications shall ingest data. PDMS is the single source of truth for production-related data. Bidirectional communication is required where applicable.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
17	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.3 Production Data Management System • Integration of PDMS with SCADA (through OT Data Lake), Well Head monitoring System, RTPMA (Real Time Production Monitoring and Analysis), GRPC and other systems as required.	We kindly request OIL to provide the OT Data Lake interface specifications for integration with DOF applications, including supported API standards/protocols, estimated tag volumes, data refresh frequencies, historical data retention requirements, and the expected data throughput/load to be handled by the integration platform.	The OT Data Lake shall support MQTT, OPC UA and REST APIs with required authentication, security and interface documentation. Its sizing, storage, retention, performance and detailed API specifications will be provided during detailed engineering under the CCC scope.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**PART-4 SECTION-IV SCHEDULE OF RATES (SOR)**	Production Data Management System (PDMS): licences, configuration, workflows and integration SOR Reference / Scope Coverage: Single source of truth for production data, including automated/manual data collection, mass and volumetric balance, well test validation, event and deferment management, production allocation, reporting, workflow approvals, historical-data QC/upload and integration with OT Data Lake, SCADA, historian, GRPC and RTPMA.	We kindly request OIL to confirm the volume, period, source systems, data formats, and overall quality of the historical production data to be migrated. Additionally, please clarify whether data cleansing, transformation, validation, and migration activities are within the bidder's scope of work.	The bidder is responsible for QC and upload of all historical data archived on hard disk, Manual, PDF, Word files etc. into PDMS, including required cleansing, validation and transformation for migration. Historical data volume, period, formats or quality shall be assessed during data collection and detailed engineering.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
19	**PART-4 SECTION-II SCOPE OF WORK (SOW)/TERMS OF REFERENCE (TOR)/TECHNICAL SPECIFICATIONS 4.0BUSINESS REQUIREMENT**	4.2.11 Integrated Production System Modelling (IPSM) Multiphase Simulation Engine: Transient multiphase flow modelling in wellbore + surface network + flow assurance for Dynamic digital model of reservoir, wellbore, surface network, facilities reflecting real physics and operational constraints.	We kindly request OIL to clarify whether the IPSM requirement envisages a fully transient multiphase simulation engine, or whether a steady-state integrated production model supplemented by real-time/dynamic data updates is acceptable.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
20	**Integrated Production System Modelling (IPSM)**	Accurate handling of transient multiphase flow, thermodynamics & Wax and hydrate kinetic mechanisms, Pipeline roughness and scale buildup effects.	We kindly request OIL to clarify the required scope and acceptance criteria for first-principles wax and hydrate modelling, including the applicable assets/flowlines, model calibration methodology, validation data to be provided, and the expected accuracy and performance criteria for the proposed solution.	IPSM shall use first-principles transient/dynamic modelling for wax deposition and hydrate formation in tubing and flowlines, including thermodynamics, kinetic mechanisms, roughness and scale effects. Correlation or empirical-only methods are not acceptable. Model validation shall use OIL-approved representative data and agreed well-level MAE/MAPE KPIs during testing/UAT
21	**Integrated Production System Modelling (IPSM)**	4.2 Technical requirement	We kindly request OIL to confirm whether IPSM may comprise multiple interoperable specialist modelling engines integrated through standard APIs, or whether all reservoir, well, network, lift and flow-assurance functions must reside within a single application.	The tender permits an integrated solution architecture and requires compatibility between IPSM and other DOF modules. Multiple interoperable specialist engines may be proposed, provided the complete solution seamlessly covers reservoir, well, lift, surface-network, facility and flow-assurance functions, supports standard integrations, and meets all functional, performance and acceptance requirements.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
22	**Integrated Production System Modelling (IPSM)**	4.2 Technical requirement Cloud based deployment.	We kindly request OIL to clarify the required deployment architecture for the DOF applications. Specifically, please confirm whether deployment on a public cloud, OIL-managed private cloud, bidder-managed private cloud, on-premise infrastructure, or a hybrid architecture would be acceptable.	Solution will be hosted in OIL's Azure environment. Please refer corrigendum for detailed SoW.
23	**Integrated Production System Modelling (IPSM)**	4.2 Technical requirement Cloud based deployment.	We kindly request OIL to confirm the infrastructure components that will be provided by OIL and those expected to be supplied by the bidder. Specifically, please clarify the scope and responsibilities related to application hosting, database infrastructure, storage, compute resources, AI/GPU infrastructure, backup systems, disaster recovery provisions, and associated platform services.	Solution will be hosted in OIL's Azure environment. Please refer corrigendum for detailed SoW.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-J

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**BEC**	3.1.1 - Documentary Evidence for Experience Criteria 2.1.1 In support of the experience criteria under Clause No. 2.1 above, the bidder shall furnish the following documentary evidence: (a) Contract document/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) 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.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
2	**BEC**	Notes to BEC Clause No. 3.1 - Experience Criteria Notes: (v) Work 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.	OIL will review and revert.
3	**BEC**	3.1 - Experience Criteria - Similar Work: Project Value (a) One (01) similar work having executed value not less than INR 186,02,86,000.00 OR (b) Two (02) similar works each having executed value not less than INR 116,26,79,000.00 OR (c) Three (03) similar works each having executed value not less than INR 93,01,43,000.00	OIL is requested to review and suitably reduce the minimum value requirements prescribed for Similar Work experience, considering the specialised nature of Digital Oil Field projects and the limited availability of contracts of the prescribed value. This may enable participation of more technically experienced and specialised bidders. Kindly consider.	OIL will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**BEC**	3.1 - Experience Criteria - Similar Work (i) 'Similar Works' shall mean Implementation of Integrated Digital Oil Field (DOF)/ Integrated Production Operations (IPO)/ Intelligent Field / Production Surveillance and Optimisation solution, for upstream Oil & Gas assets in India or Abroad. The Integrated DOF/ IPO / Intelligent Field / Production Surveillance and Optimisation solution mentioned above shall mandatorily include - 1. Production Data Management System (PDMS) 2. Remote Wireless Well Head Monitoring and Control (including Integration /augmentation of existing) 3. Integrated Production System Modelling (IPSM), consisting- (a) Material Balance Reservoir Modelling (b) Well Performance Model (c) Surface Network Modelling & Optimization (d) Wax & Hydrate Deposition/Prediction Modelling ...	OIL is requested to allow the bidder to leverage the relevant experience of the OEM/technology partner for meeting the Similar Works experience criteria, particularly where the OEM has successfully implemented comparable DOF/IPO/Intelligent Field solutions. The bidder shall remain fully responsible for the complete execution and performance of the contract. Kindly consider.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
5	**BEC**	3.0 FINANCIAL EVALUATION CRITERIA: 3.1 Annual Financial Turnover from Operations of the Bidder during any of the last three (03) completed financial/accounting years preceding the Original Bid Closing date must be at least INR 116,26,79,000.00 (or US$ 12,242,600.00). [Annual Financial Turnover of the bidder from operations shall mean- "Aggregate value of the realization of amount made from the sale, supply or distribution of goods or on account of services rendered, or both, by the company (bidder) during a financial year" as per the Companies Act, 2013 Section 2 (91).] 3.4 Consortium Case: In case of bid from Consortium of Companies, any one of the consortium members shall have an annual financial turnover from operation of minimum INR 116,26,79,000.00 and other members of the consortium shall have an annual financial turnover from operation of minimum INR 58,13,39,500.00, during any of the preceding 03 (Three) financial/accounting years reckoned from the original bid closing date. Net worth of all the members must be Positive for the	OIL is requested to suitably reduce the annual financial turnover criteria prescribed for consortium members or allow applicable MSME relaxation in the financial BEC for other consortium members. This may enable participation of more capable and specialised consortium partners. Kindly consider.	No change

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		financial/accounting year preceding the original bid closing date.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
6	**SOW**	3.1.2 - Key Personnel 17.0 Personnel to be Deployed by Successful Bidder: Bidder to ensure that the proposed CVs for the project are on bidder's payroll for the last one year at least from the original bid closing date.	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.	Tender to prevail. Manpower requirements as mentioned in the tender to be on Bidder's payroll.
7	**GCC**	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.	OIL is requested to allow the bidder to engage subcontractors/sub-vendors for specific work packages, subject to prior approval of OIL. The bidder shall remain fully responsible for the complete execution and performance of the contract. Kindly consider.	No change in GCC provision

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SOW**	9.0 PROPOSED IMPLEMENTATION PLAN The Contract shall be valid for a period of 72 months [12 months for implementation & 60 months of AMC (includes 3 months of Hypercare) after going live from the Effective Date], comprising: a) Implementation Phase b) Go-Live c) AMC (including Hypercare Period after Go-Live)	OIL is requested to allow an overall implementation timeline of 36 months up to Go-Live, considering the extensive scope and scale of the project, including field instrumentation across multiple wells, system integration, implementation of the DOF platform, testing, user acceptance and training. The additional time would facilitate proper execution, integration and stabilisation of the solution across OIL's operational assets. Kindly consider.	The stipulated contract duration and implementation schedule shall remain unchanged.
9	**SOW Cl. 4.2.1.3**	SOW Cl. 4.2.1.3 Integration with existing Wireless Well Head Monitoring Solution and Real Time Production Monitoring and Analytics. OIL presently has two wireless Well Head Monitoring systems supplied by M/s Yokogawa India Ltd. for 10 wells and M/s Kelton Technologies Ltd. for 77 wells, both cloud-based. The DOF solution provider shall incorporate these existing systems into the OT Data Lake via the existing SCADA system. Existing wellhead data of 90 wells presently at cloud shall be	Will OIL mandate that Yokogawa and Kelton provide open API keys, root credentials, and modem APN reconfiguration access? If OEM cooperation is not provided, will OIL allow cloud-to-cloud API integration during transition or pay for replacement hardware under SOR Line Item 54?	Not cloud to cloud (Architecture to be referred to)

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		integrated with the SCADA system directly from the Edge device through GSM and ISP device over MPLS technique.		
10	**SOW**	SOW Cl. 4.2.13.7 11 Coriolis Mass Flow Meters for crude dispatch. The Mass Flow Meter specification includes vibration assessment and suitable mitigation/support arrangements. BOQ Item 34 specifies 11 Coriolis Mass Flow Meters for crude dispatch, CT-ready with heat tracing/jacketing.	Will OIL provide site vibration spectrum analysis data (frequency & amplitude) during detailed engineering, and permit installation of flexible pulsation dampeners or bellows upstream/downstream of the meter skid?	In bidder's scope.
11	**SOW**	SOW Cl. 4.2.13.9; BOQ Item 36 Solar PV system shall be sufficiently sized to power the supplied components and shall provide sufficient battery backup to withstand 5 dark days. BOQ Item 36 specifies 100 complete solar-power sets with PV modules, batteries, controllers/inverters where applicable, charger, structures and minimum five-dark-day backup.	Confirm whether bidders may deploy modular solar/battery capacities tailored to the specific power load of each well plinth type (Self-Flow vs Actuated Plunger/Gas Lift) as long as 5-day autonomy is strictly maintained.	The solar system shall be sized by the bidder for the supplied load and must provide minimum five-dark-day battery backup. Site-specific sizing shall be finalized during detailed engineering.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
12	**SOW**	SOW Cl. 4.2.1.1 No control command shall originate from, be initiated by, or be capable of being issued from any Level 4/Level 5 system, cloud application, cloud-hosted analytics platform, cloud-based HMI, or any component residing outside the DMZ/Level 3.5. All cloud-based decision support, optimization, AI/ML and advanced analytics functions shall operate in advisory/read-only mode. Autonomous control functions shall execute only in field RTU/PLC/Edge Controller residing within OIL OT Zone (Purdue Level 1/Level 1.5).	Clarify the exact architecture for closed-loop autonomous control. Should AI/ML optimization models run locally on L1.5 Industrial Edge compute hardware, or will L5 Cloud models be permitted to send setpoint recommendations to L3 SCADA via secure DMZ queues for operator single-click approval?	Oil will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
13	**SOW**	SOW Cl. 4.2.23 The bidder is free to offer any MeitY empanelled public cloud subscription. OIL has established a secure cloud landing zone in MS Azure. Traffic towards the proposed public cloud shall be routed through OIL's Azure Landing Zone. Any applicable data transmission cost from the offered public cloud to OIL's landing zone/Azure shall be factored by the bidder. Additional security gateway/connectivity components such as NGFW or VPN gateway for secure IPsec connectivity shall also be factored by the vendor.	To optimize performance and eliminate redundant egress costs, will OIL permit hosting the DOF cloud platform directly within an isolated subscription inside OIL's existing MS Azure enterprise tenant?	DOF Solution to be hosted in OIL's existing private cloud... OIL will provide the required infra in OIL's Azure environment.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**SOW**	SOW Cl. 4.2.1.6; SLA Cl. 6 The bidder shall provide M2M SIM cards for communication. Remote Site Connectivity SLA requires connectivity availability of ≥99.0% per commissioned remote site per calendar month. The bidder shall also consider recurring cellular/SIM communication charges during the AMC period as part of its scope.	In remote wells where cellular signal is absent, will OIL provide access to its private network, or will satellite/VSAT connectivity be reimbursable as a pass-through cost under change control?	The complete remote-site connectivity, including LTE/4G/5G, radio, microwave, VSAT, leased lines and recurring charges, is in bidder scope. OIL will facilitate Private APN over MPLS for cellular connectivity…. OK

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Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**SOW**	SOW Cl. 4.1.4.1; Cl. 4.2.5 The solution shall scan RPC data every stroke and store operational parameters and dynacard data locally on the Edge hardware at the wellsite. The Edge IoT hardware shall perform analysis on captured card data using downhole analysis methods and shall support a minimum of two rod lift analysis methods for data analysis to generate downhole cards apart from the RPC downhole card.	Is it acceptable if the primary RPC executes Gibbs wave equation for stroke-by-stroke real-time control, while the secondary analytics/pattern matching model runs on an associated Industrial Edge Compute Gateway at 1-minute intervals?	The EDGE IoT hardware shall acquire and process Rod Position–Load (RPC) data for every pumping stroke and shall locally store the raw and processed dynamometer-card data together with relevant SRP operating parameters. The EDGE system shall perform real-time downhole pump-card generation and rod-lift diagnostics using the captured surface dynamometer data. In addition to the conventional RPC-based downhole-card calculation, the system shall support a minimum of two independently recognized and technically validated rod-lift/downhole-card analysis methodologies, such as the Gibbs Wave Equation method and the Modified Everitt–Jennings . The system shall be capable of comparing and utilizing the outputs of these methods for pump fillage estimation, rod/pump condition assessment, anomaly detection and autonomous SRP optimization.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
16	**SOW**	SOW Cl. 4.1.4.2; Cl. 4.2.6 The solution shall cover 75 plunger-lift wells. It shall dynamically optimize shut-in duration using energy-based lift qualification and energy-balance calculations consistent with Foss and Gaul methodologies. The solution shall provide casing sway compensation, dynamically control after-flow duration using calculated critical production rates or velocities, and support Auto Adjust functionality. It shall also support automated coordination with actuated production/choke valves and autocatchers.	Confirm the default fallback logic when plunger arrival sensors fail or PVT properties change. Will the system automatically revert to time-based or pressure-differential (CHP-THP) threshold control until sensor data is restored?	OIL will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
17	**SOW**	SOW Cl. 4.1.4.3; Cl. 4.2.7 The solution shall cover all 48 gas-lift wells and provide Autonomous Gas Lift Optimization. It shall support full nodal analysis, multi-well gas allocation, surface network modelling, automated step-rate testing and optimization of gas injection. For intermittent gas lift, primary closed-loop injection rate control shall be implemented using a motorized choke with continuous adjustment of choke position to achieve and maintain the target gas injection rate.	Confirm whether automated step-rate tests require real-time MPFM validation on every step, and whether OIL will provide pre-approved safe operating bounds (min/max gas injection rate and max choke travel per hour) to prevent well instability.	Automated step-rate testing shall follow Clause 4.1.4.3.4. Under the IPSM deliverables, the bidder shall develop a physics-based well model and perform the necessary nodal analysis to establish the Gas Lift Performance Curve (GLPC) and Optimum Cycle Time (OCT) prior to deployment of the EDGE autonomous optimization system at the well level. The validated model outputs shall serve as the baseline/reference inputs for the EDGE autonomous optimization system. Following deployment, the optimization results, production rates and key well-performance parameters generated by EDGE shall be validated against field measurements obtained from MPFM, Test Separator, and SCADA-based well testing, with appropriate model calibration and reconciliation as required.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
18	**SOW**	SOW Cl. 4.1.4.4; Cl. 4.2.8 The solution shall provide hybrid physics-based and ML-based optimization for 28 ESP wells. The solution shall optimize pump operation, reduce energy consumption, detect anomalies and automatically adjust pump frequency through VFD. The acceptance requirements include minimum 30% reduction in PI excursions, minimum 5% improvement in energy intensity and gas-lock warning performance with precision ≥80% and recall ≥80% on validated events.	Will the 30% PI excursion and 5% energy efficiency KPIs be measured only on ESP wells equipped with fully functional downhole multi-sensor packages (Intake Pressure/Temperature) and stable power supply?	The tender does not provide that the 30% reduction in PI excursions and 5% improvement in energy intensity will be measured only on ESP wells equipped with fully functional downhole multi-sensor packages or having uninterrupted power supply. KPI baselines, eligible measurement periods, representative wells/configurations and validation methodology shall be finalized with OIL during detailed engineering and UAT, using OIL-approved production-representative data and validated operating conditions.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
19	**SOW**	SOW Cl. 4.1.6; Cl. 4.2.10 The Virtual Flow Metering solution shall estimate oil, gas and water flow rates across all wells using a hybrid physics and ML approach. Accuracy targets are oil & water rate MAPE ≤10-15% on validation wells and gas rate MAPE ≤15-20%. Automatic re-fit shall be performed when model drift exceeds the defined threshold.	Confirm that VFM MAPE targets (10-15%) are validated against wells tested within the preceding 30 days. If a well has not undergone physical well testing within 30 days due to operational constraints, will model drift penalties be waived?	The VFM accuracy targets under Clause 4.2.10 remain applicable. Validation/re-tuning shall use well-test or reference data; exclusions apply only where dependencies are documented and accepted under the SLA.
20	**SOW**	SOW Cl. 4.1.5; Cl. 4.2.9 The AI-based Digital Well Integrity Management solution shall cover existing and upcoming wells and provide primary/secondary barrier status, MAASP calculations and anomaly/risk analytics. KPI requirements include time-to-alert for annulus anomalies ≤5 minutes and correct classification of barrier state ≥90% versus SME review on sampled cases.	Will OIL provide digitized well completion drawings, casing design specifications, and cement bond log data in structured electronic format during the blueprint phase for all wells?	Oil will provide the hard copies, PDF, Word files, Manual, Digitized data.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
21	**SOW**	SOW Cl. 4.1.7; Cl. 4.2.11 The Integrated Production System Modelling solution shall use transient multiphase flow modelling for the wellbore, surface network and flow assurance, reflecting real physics and operational constraints. It shall address wax and hydrate kinetic mechanisms and support choke optimization, valve configuration and rate redistribution. Physics-based/first-principles modelling is required for the specified flow assurance and transient modelling requirements, and empirical/correlation-only approaches are not acceptable.	Confirm whether transient multiphase simulation is required continuously for all 700 wells, or if transient execution is restricted to event-driven/on-demand scenarios (e.g., shut-in/restart, pigging) while steady-state nodal models are used for routine surveillance.	OIL will review and revert.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
22	**SOW**	SOW Cl. 4.1.2; Cl. 4.2.3 Production Data Management System (PDMS) shall provide a single source of truth for production-related data and interface with OT Data Lake, SCADA, Historian, GRPC and RTPMA. Under Cl. 4.2.3, the bidder shall be responsible for QC and upload of all historic data archived in the hard disk into the PDMS.	Please define the specific historical data window (e.g., last 3 to 5 years) and data schemas required for QC and upload into PDMS. Data prior to this window should be loaded as bulk archives without mandatory re-formatting.	The 3–5 year historical data window may not adequately cover all the requisite information; therefore, the bidder shall be prepared to utilize all relevant and necessary legacy data available with OIL for model development.
23	**SOW**	SOW Cl. 4.2.23 Model drift monitoring is included as part of the AMC scope. AI model retraining is limited to a maximum of four (4) retraining cycles per year on a quarterly basis during the AMC period. In case of drift, model retraining shall be carried out accordingly to retain the accuracy level of 95%.	Confirm that ad-hoc model retraining triggered by major physical well workovers or choke size changes requested by OIL will be classified as operational configuration changes under the AMC hourly rate card rather than counting against the 4 baseline quarterly retraining cycles.	Model retraining obligations shall be as specified in Clause 4.2.26. Up to four quarterly cycles are assumed, apart from that it is bidder's responsibility to maintain accuracy of model throughout AMC period

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Sl. No.	Section	Clause Reference	Query	OIL's Response
24	**Payment Terms**	Proforma-B / Payment Terms The stated requirement regarding Schedule A Core Application & Analytics being limited to 50% of Total Contract Cost and the excess amount being withheld from the first invoice and released only after 5 years of AMC could not be matched to the uploaded tender text. This row should not be treated as a confirmed tender clause without rechecking the source/version from which this wording was taken.	Does the 50% capping rule apply to quoted price excluding GST or including GST? Furthermore, request that any quoted amount exceeding 50% be redistributed pro-rata across implementation milestones (Milestones 2-5) rather than withheld until the end of AMC.	No change; Capping is on quoted price excluding GST.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
25	**Payment Terms**	Payment Terms - Software & Hardware Package Software & Hardware Package for DOF solution, Milestone 1 - Kick-off & Mobilization Period. Milestone description includes kick-off meeting, identification of all resources, onboarding of implementation team and completion of all contract-related compliances. Payment is 100% of line-items under Line Item 50 as per BOQ. LD will be applicable on non-compliance, with T1 = 30 days.	Please confirm that upon completion of Mobilization (deployment of PM and core team, baseline RACI sign-off), 100% of Line Item 50 payment will be released unconditionally without linking to field hardware FAT.	Payment shall be released against completion and acceptance of Kick-off and Mobilization requirements under the payment milestones. Milestone 1 is not linked to field-hardware FAT.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**Payment Terms**	Payment Terms - Instrumentation & Communication Packages Milestone 1 covers placement of purchase order for finalized instruments and receipt of all material at site. Contractor shall submit the receipt of material invoice along with inspection, certifications, FAT and warranty documents. 80% of material value of individual line-items under Sections D & F as per BOQ shall be paid.	Confirm that formal witness FAT is required only for major skid packages (MPFM, Mass Flow Meters, VFDs), and that 80% material payment for standard transmitters will be released based on OEM Inspection/Quality Certificates upon site receipt.	OIL will review and revert.
27	**Payment Terms**	Payment Terms - AMC; BOQ / SOR The AMC period is 5 years after Go-Live. For the first year, fixed AMC charges per quarter shall be quoted as per the Schedule of Rates. For the remaining AMC period, maintenance and support shall be on actual consumption and paid based on hours consumed against the quoted hourly rate card. AMC payment for Years 2-5 is capped at 4,000 hours per year.	Confirm that routine platform maintenance, bug fixes, and SLA compliance are covered under the baseline AMC fee, and the 4,000 man-hour rate card applies strictly to new custom workflow requests or major application enhancements.	OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
28	**SCC**	SLA Cl. 6 The upper limit of penalty shall be capped at 7.5% of the AMC value for each quarter.	Confirm that the aggregate sum of all liquidated damages and performance penalties across all SLAs in any given quarter shall be strictly capped at 7.5% of the total quarterly AMC invoice value.	To be guided by tender terms

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
29	**SCC**	SLA Cl. 7.0 Penalties shall not be levied where there is a Force Majeure event affecting the SLA beyond the control of the Successful Bidder or where non-compliance is due to reasons beyond the control of the Bidder. Such circumstances include non-availability/outage/degradation/shutdown of OIL-owned or OIL-managed systems, networks, infrastructure, databases, applications, Historian, SCADA/DCS/PLC systems, SAP/ERP, OT Data Lake, APIs or interfaces, third-party telecom/connectivity services, cloud landing zone, identity services, security gateways/VPN/leased line, as well as power failure, plant shutdown, operational or safety restrictions, emergency conditions and denial of site access, subject to the conditions specified in the clause.	Confirm that an automated joint log review mechanism between OIL EIC and Contractor will be established monthly to reconcile operational outages before applying SLA deductions.	SLA exclusions shall be supported by synchronized logs/documentary evidence and are subject to OIL's verification and acceptance.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
30	**BEC**	BEC Cl. 8.2 & 8.3 The bidders shall present relevant BEC documents to OIL's empanelled Independent Third-Party Inspection Agencies for verification/certification. Unverified supporting documents shall not be considered. However, a bid may be provisionally considered if accompanied by an undertaking to submit duly verified and certified copies and the Inspection Certificate within Seven (07) days from the actual date of bid opening. Failure to submit the verified/certified documents within the stipulated time shall result in outright rejection.	Request extending the post-bid opening TPI certificate submission timeline from 7 calendar days to 15 working days.	No change

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
31	**BEC**	BEC Cl. 2.2; GCC Cl. 30.0 Mobilization time is 30 days from the date of issuance of Letter of Award. GCC Cl. 30.0 provides that failure to mobilize/deploy and commence operation within the specified period gives OIL the right to terminate the contract. In case of extension of mobilization, LD shall be levied at 0.5% of contract value including mobilization cost per week or part thereof, subject to a maximum of 7.5% of the Contract Price.	Confirm that mobilization compliance within 30 days is fulfilled upon deployment of the Project Manager, core technical team, submission of baseline RACI/project plan, and completion of the Kick-Off workshop.	Oil will review and revert.
32	**SCC**	SCC Cl. 14.0; SOW Cl. 6.3(ix) SCC Cl. 14.0 states that Sub-Contracting is Not Allowed. Separately, SOW Cl. 6.3(ix) states that all documents and literatures are to be supplied in English Language.	Confirm that hiring local civil/erection labor, transport agencies, or OEM field technicians for routine mounting/cabling under vendor supervision is permitted and not classified as unauthorized sub-contracting.	Oil will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
33	**ITB**	GCC Cl. 34.0; Appendix-VI The successful bidder shall submit a duly filled ESG Questionnaire in the prescribed format within 15 days from the date of award of contract or issue of purchase order. The ESG Questionnaire along with Explanatory Note is provided as Appendix-VI.	Please provide the ESG Questionnaire format along with the tender addendum so bidders can review and prepare responses prior to bid submission.	The ESG Questionnaire and Explanatory Note are provided as Appendix-VI of the tender document.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
34	**GCC**	GCC Cl. 24.0 / SCC Cl. 24.0 Contractor should provide the list of items to be imported under the Contract in the format specified in Proforma-A along with the bid for issuance of the requisite undertaking/certificate for availing concessional rate of customs duty. The Contractor shall make a written request to OIL after shipment, along with invoices and shipping documents, with clear 15 working days' notice, requesting issuance of the Recommendatory Letter/requisite undertaking/certificate. OIL shall issue the Recommendatory Letter/requisite undertaking/certificate for eligible items included in Proforma-A, subject to the contractual conditions.	Confirm that OIL will issue Essentiality Certificates (EC) / Concessional Customs Duty recommendatory letters for all imported field instruments and software licenses listed in Proforma-A.	OIL will issue the requisite undertaking/certificate only for eligible items covered under List-16 of Customs Notification No. 45/2025-Cus and included in Proforma-A, subject to contractual conditions.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
35	**SOW**	SOW Cl. 4.2.23; SCC Cl. 11.0 SOW/SCC requirements provide for handover of source code and repositories, configuration files and deployment scripts, model artefacts, feature stores and training pipelines, and all technical and operational documentation. SCC Cl. 11.0 further requires complete technical and operational knowledge transfer and handover at demobilization, with no data, models or artefacts retained by the Bidder post exit.	Confirm that for COTS software modules, source code handover is applicable to custom developed integration scripts, analytics workflows, and trained AI model weights, while core COTS product IP remains with the software OEM under perpetual enterprise licensing.	Confirmed

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-K

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	**SOW**	Sections 3 and 4.1; Annexures A and B	Please provide the well list by field, lift type and required application, showing how the 700-well software scope, 380 wells prioritised for instrumentation and 90 wells in existing sensor programmes overlap.	Well list will be provided by OIL
2	**SOW**	Sections 3 and 4.1.1; Annexure A	Which measurements and control devices are available and operational at each well? Please identify equipment being provided by OIL and equipment required from the bidder, including any gaps in Annexure A quantities.	Bidders are advised to visit site location
3	**SOW**	Sections 4.2.1.1, 4.2.1.3 and 4.2.1.6	Please share site power and communications availability, existing controller interfaces, and the OT Data Lake interface specifications and readiness dates. What upgrades are required to connect the wells to DOF?	The bidder shall assess site-wise Power and network requirements and provide complete connectivity, solar/power systems and interfaces. Existing SCADA uses OPC UA; RTU/modem details and OT Data Lake sizing, retention and API specifications will be shared during detailed engineering

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
4	**SOW**	Sections 4.1.2 and 4.1.4 to 4.1.7; Section 4.2.3	What historical production, sensor, failure and intervention data is available, at what frequency and quality? Please also confirm availability of completion data, fluid properties, equipment curves and existing calibrated models, with representative samples.	The requirement shall be mandatory in accordance with Sections 4.1.2, 4.1.4 to 4.1.7, and 4.2.3. All necessary data and information required for implementation shall be provided by OIL during the detailed engineering phase.
5	**SOW**	Sections 3.4.4, 4.2.3.1 and 4.2.10	How frequently are wells tested, using which equipment and with what measurement accuracy? Will OIL provide additional well tests where required to calibrate and independently validate the models?	All necessary data and information required for implementation shall be provided by OIL during the detailed engineering phase.
6	**SOW**	Section 4.1.4; Section 4.2.1.1, particularly page 121	Please confirm the wells and existing control capabilities for each lift type. What operator approvals, operating limits and deployment architecture apply when moving from recommendations to autonomous control?	All necessary data and information required for implementation shall be provided by OIL during the detailed engineering phase.
7	**SOW**	Sections 4.1.6 and 4.2.10	What reporting frequency and oil, gas and water accuracy targets apply to each well class? What performance is expected for wells without continuous measurements or sufficiently recent well tests?	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
8	**SOW**	Sections 4.1.7 and 4.2.11	Which networks and facilities require dynamic modelling, and at what level of detail? Please confirm availability of network drawings and fluid laboratory data needed for wax and hydrate predictions, and responsibility for obtaining missing inputs.	The IPSM reservoir material-balance model, integrated well models, and surface-network model shall provide the reservoir and production-system context required for integration with the EDGE autonomous artificial-lift optimization system. The IPSM shall assimilate validated historical and real-time/near-real-time production, pressure, injection, PVT, and other relevant production data, and shall periodically update the reservoir model to forecast reservoir pressure, fluid production, GOR, water cut, depletion, recovery, and other relevant reservoir-performance parameters for the 700-well population. The resulting reservoir- and field-level forecasts shall be integrated with the well and surface-network models to establish the operating envelope, production constraints, network limitations, and artificial-lift requirements. At the individual well level, IPSM shall provide the physics-based reference model, well-

Sl. No.	Section	Clause Reference	Query	OIL's Response
				performance relationships, GLPC, OCT/optimum operating targets, and relevant network constraints required by EDGE for autonomous artificial-lift optimization. The EDGE autonomous optimization system shall continuously assimilate real-time field data from wellhead instrumentation, production attributes, SCADA, VFM/MPFM, and other available measurement systems and determine/optimize artificial-lift operating parameters within the operating constraints established by the IPSM. The optimization framework shall consider both local well-level performance and global field-level production-system objectives, including interactions among wells, gathering networks, compression systems, and surface facilities. This integrated approach shall ensure that well-level autonomous optimization does not result in sub-optimal field-

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				level performance, thereby enabling coordinated and constraint-aware artificial-lift optimization across the 700-well population.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
9	**SOW**	Sections 4.1.5 and 4.2.9	Which well categories are included in integrity management? Please confirm availability of barrier diagrams, pressure-test and annulus histories, approved pressure limits, and OIL risk-assessment rules.	AI-based Digital Well Integrity Management applies to all existing and upcoming OIL wells. It shall integrate well construction/design and real-time pressure, temperature, flow and annulus data. Availability of barrier diagrams, histories, approved limits and risk rules will be assessed during blueprinting
10	**SOW**	Sections 4.2.8 to 4.2.10; SLA Section 4, page 203	How does the overall 95% accuracy requirement relate to the different VFM, ESP and well-integrity targets? Please define the governing metric, validation dataset and baseline for each application, including production and efficiency improvements.	OIL will review and revert
11	**SOW**	Sections 9.2 and 9.3; Annexure B; Section 4.2.21	Please confirm the rollout priorities and availability dates of upcoming wells and OIL-provided systems. Can acceptance be phased where wells, instrumentation or validation data are not ready?	OIL will review and revert
12	**SOW**	Section 4.1; Section 4.2.1.5; pages 162 to 163; SLA page 202	Does adding future wells at no extra cost include model building, integration and computing capacity, or software licences only? Please also clarify the included recalibration and retraining obligations during support.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

QUERIES FROM PARTY-L

Sl. No.	Section	Clause Reference	Query	OIL's Response
1	2 of 307	Duration of the contract - 1 + 5 years.	1 year implementation is not feasible. 3 years for installation and commissioning of instruments and RTU is minimum required. This is from the date of drawing/ data sheet approval by client. S/w implementation/Go-Live is additional 1 year from here.	OIL will review and revert
2	28 of 307	Local conditions :Company (OIL) shall not permit any Changes to the time schedule of the Contract or any financial adjustments arising from the Bidder's lack of knowledge and its effect on the cost of execution of the Contract.	Any delay which are not attributable to us (example- Not getting shutdown of well or at installation areas as per pre-agreed schedule) may have additional time and price implication and to be concluded in a mutually agreeable manner during execution.	Tender provision remains unchanged. Delays beyond the bidder's control shall be considered only under the Force Majeure/SLA exclusion provisions, subject to documentary evidence and OIL's acceptance.
3	78/307	LD - @ 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.	Kindly make for the "Undelivered portion" instead of calculating it on total contract value.	OIL will review and revert
4	78 and 157/307	Warranty - 12/18 from the date of receipt of material. / Clear 18 months from the date of receipt of materials (both h/w and s/w.	Contradicting ...pls refer next line.	OIL will review and revert
5	175/307	9.2 (Sr No 8) Warranty for installed	1 year from the date of Solution Go-Live.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		instruments - On installed instruments and devices		
6	**99/307**	4.1.1 Instrumentation Installation & Commissioning	Kindly share "Plinth wise well list "for each asset to estimate Wireless networking accessories, Solar panel ,RTU/Edhe qty, Erection-installation h/w and services.	Annexure-B provides location-wise plinth counts. Detailed plinth-wise well and instrument allocation shall be finalized during site survey and detailed engineering. Well Plinth list to be provided.
7		Instrumentation Installation & Commissioning	Kindly share the instrument list for each ÖCS/GGS/Installation to estimate the BOM and erection hardware -installation services.	OIL will review and revert
8		Instrumentation Installation & Commissioning	Kindly inform availability of power at each Well head and Installation.	Power and network are not uniformly available at all wellheads. Site-wise availability shall be assessed by the bidder during the mandatory site visit; required solar/power arrangements are in bidder scope

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
9		Instrumentation Installation & Commissioning	Please inform the details of SRP, Plunger- lift wells , ESP where in augmentation work to be done. Please share existing system details like - availability of VFD, Soft starter, DOL with their ratings -OEM, Data sheet to evaluate integration scope (Communication protocol and interfacing h/w, cable laying etc if hardwired signals to be interfaced with RTU/Edge). This is required for each panel /systems those to be integrated with proposed system.	OIL will provide available relevant data
10		After installation, all instruments shall be integrated with the existing ABB SCADA RTU system available at each location. The bidder shall carry out all wiring, cable termination, and connections up to the existing ABB RTU panel. The complete termination up to the ABB RTU panel shall be within the bidder's scope of work. Wherever as necessary, bidder will also have to provide the marshalling panel at RTU along with all other accessories.	If can bring offered hardwired signals upto ABB marshaling cabinet. However, termination at ABB cabinet, any hardware , software, service at ABB end, shall be in OIL/ABB's scope. Alternatively, we can propose new RTU and after bringing signals upto the new RTU, we can send those signals to FHQ Duliajan PDMS server using OIL's existing RF Link . This is to avoid dependency on existing ABB system. Kindly review and suggest.	OIL will review and revert

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Sl. No.	Section	Clause Reference	Query	OIL's Response
11	**101/307**	4.1.3.4 Safety & Fail-Safe Operations - Implementation of fail-safe shut down logic for gas lift wells.	Please inform if SIL 3 ESD system is envisaged.	Only BPCS will suffice.
12	**102/307**	4.1.4.1 SRP Optimisation: 45 numbers	Kindly share the existing 45 well details (DFD, DOL, Softstarter, Make , Model -OEM , Dynamometer , Communication protocol (soft integration touch point), Hardwired (0-5 v / 4-20 Ma) integration .Augmentaion- Retrofit scope, Existing power system details.	Bidders are encouraged to have Rajasthan field site visit. Bidders are requested to share the data sheet, what kind of information required,

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Sl. No.	Section	Clause Reference	Query	OIL's Response
13	**105/307**	4.1.4.1.5 Trend Viewer – Data Trend of operational data on Rod Pump Controller HMI. • HMI can be viewed remotely over webserver using 802.1X Authentication.	Do we need to consider any local HMI at wellhead panels ? Or need to integrate any existing local HMI with proposed system for visualising remote operations in centralised dashboard ? How many such system have been envisaged - kindly share plinth wise well details .	A cabinet-mounted HMI/local display shall be provided at each production well/installation/facility for local monitoring and operation of the DOF system. The HMI shall provide a clear visualization of all key well operating, production, artificial-lift and control parameters and shall permit authorized personnel to monitor and, where applicable, adjust the relevant operating set points and control parameters. The EDGE device shall have direct access to all necessary real-time wellhead measurements, status signals and controllable parameters required for autonomous optimization and closed-loop control. These shall include, as applicable, wellhead pressure/temperature, casing pressure, flowline pressure, production rate, artificial-lift operating parameters, valve/control-device status, alarms and other critical wellhead parameters. A larger local panel/display may

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				be provided at the production installation/facility for centralized monitoring of multiple wells and equipment. In addition, the DOF platform shall provide web-based access through authorized computers/workstations for remote monitoring, visualization, diagnostics & analysis

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Sl. No.	Section	Clause Reference	Query	OIL's Response
14	**107/307**	4.1.4.2.1 The solution shall cover 75 wells, which includes 34 existing wells and 41 upcoming wells, with inherent provision for future instrumentation, well count expansion.	We understand that Instrument listed in Annexure A and B is including of these "Future instruments"'. Kindly confirm.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
15	**109/307**	4.1.4.2.3 Plunger arrival detection sensors Actuated production valves and actuated choke valves with position feedback Automated auto-catcher assemblies Optional gas and liquid flow measurements where available Field equipment shall support configurable fail-safe behaviour aligned with the Operator's operating philosophy.	Kindly inform if instrument list provided vide Annexure A and B is including of these sensors or to be considered additionally. Please inform if you are planning for ESD/SIL3 system (loop, hardware system engineer etc.)	Required plunger-lift instruments are included in Annexure-A. The tender requires configurable fail-safe behaviour but does not specify a SIL-3 ESD system. The EDGE-enabled autonomous Plunger Lift (PL) and Plunger-Assisted Gas Lift (PAGL) optimization system shall integrate a physics-based PL/well model within the IPSM and use real-time wellhead, production and plunger-cycle measurements to continuously determine the dynamic well operating state and autonomously optimize PL/PAGL operating parameters. For each applicable well, the bidder shall provide, integrate and commission all necessary instrumentation, control devices, communication interfaces and EDGE hardware required for closed-loop autonomous operation. The EDGE shall continuously assimilate these measurements into the IPSM to estimate well state and optimize, as applicable, shut-in time, opening time,

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
				plunger arrival criteria, afterflow duration, cycle frequency and PAGL gas-injection rate, pressure and timing. Following each cycle, predicted and measured responses shall be compared and the model parameters shall be automatically updated/recalibrated where required. The system shall support closed-loop autonomous operation, while retaining configurable operating limits, operator approval/override, manual mode and fail-safe shutdown/fallback logic. All measurements, model predictions, control actions, parameter changes, alarms and optimization decisions shall be recorded in the EDGE/DOF platform for monitoring, validation, auditability and continuous optimization.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
16	**110/307**	4.1.4.3 Gas lift optimisation-The solution shall cover all the 48 gas (continuous and intermittent) lift wells, with inherent provision for future instrumentation, well count expansion, and lift regime changes	We understand that Instrument listed in Annexure A and B is including of these "Future instrumentation, well count expansion and lift regime changes. Kindly confirm.	OIL will review and revert
17	**110/307**	4.1.4.3.2 FI Scope -The hardware scope shall include a comprehensive sensorization plan accounting for field layout, topography, environmental conditions, and site constraints. Optional wellhead and annulus sensors for enhanced diagnostics and stability monitoring .	We understand that list of instruments mentioned in Annexure A and B is including of all these sensors and instruments. Kindly confirm.	OIL will review and revert
18		motor protection features where applicable, and configurable fail-safe modes for power and signal loss.	Please inform if you are planning for ESD/ SIL3 safety loop (and field hardware engineering) by mentioning "fail safe mode".	Only BPCS will suffice.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
19	**111/307**	4.1.4.3.3 Core Solution Requirements -The solution shall support progressive control, enabling transition from operator-assist advisory or supervisory modes to fully autonomous closed-loop control without requiring new permanent downhole sensors.	We understand, no downhole sensor is currently under bidder's scope. Please confirm.	Confirmed. No new permanent downhole sensors are mandated for progressive gas-lift control
20	**113/307**	4.1.4.4.1 28 wells (8 existing ESP wells and 20 upcoming wells).	We understand instrument list shared vide Annexure A nad B is including of all required sensors and instruments and hardware for these ESP wells .Kindly confirm. Please share existing ESP details (data sheet of OEM , PBC/MCC panels , communication protocol ,hardwared signal etc.)	Annexure-A includes the stated ESP instruments. Relevant data will be provided.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
21	**120/307**	2 . Communication through Existing SCADA Infrastructure - For field instruments installed at locations where OIL's existing SCADA infrastructure is available, the field devices shall be interfaced directly with the existing SCADA RTU/PLC. The existing SCADA system shall be responsible for transmitting the data to the SCADA Master Control Station (MCS), from where the data shall be made available to the OT Data Lake and the cloud-based applications. The Bidder shall provide all necessary interfaces, protocols, and engineering required for seamless integration with the existing SCADA system.	We understand, we have to bring FI signals upto ABB RTU 's marshalling cabinet. Termination of signals at marshalling cabinet of ABB and sending /interfcaing those signals with existing ABB SCADA and then interfacing with proposed PDMS server / OT data lake will be in OIL/ ABB's scope. Any h/w, s/w, services will be in OIL/ABB's scope once we bring the FI signals just before the ABB's marshalling cabinets. Pls confirm.	Not accepted. The bidder shall provide all interfaces, protocols and engineering required for seamless integration with existing SCADA, including termination up to the ABB RTU panel.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
22	**122/307**	The existing well head data of 90 wells which is presently at cloud, needs to be integrated with the SCADA system directly from the EDGE device through GSM and ISP device over MPLS technique. If any additional device is required, bidder shall consider that in their scope. Bidders are also requested to visit site to assess the actual requirement	Kindly note that since EDGE devices have been designed and supplied by other OEM, any hardware , software ,services required at EDGE/RTU end shall be in OIL/ Existing vendor's scope .Integration shall be joint responsibility of Existing vendor and the proposed bidder for DOF. Kindly confirm.	Not accepted. Integration of the existing 90 wells, including any additional device, hardware, software and services required, is in bidder scope.
23		Bidder shall ensure that the complete cloud-based solution shall have 20% spare of I/O at gateway level, edge device level, RTU level and cloud infrastructure level.	We request OIL India to procure these from respective OEM 's directly and we shall assist to integrate those data in proposed platform.	OIL will review and revert
24	**123/307**	NOTE - 1 Bidder scope is limited to field instrumentation, WirelessHART/ISA100 networks, gateways, edge devices, and integration with the OT Data Lake through existing OIL	We understand, this is applicable for the new FI signal integration approach point of view and not for the existing EDGE-RTU integration . Kindly inform.	The note applies to the DOF field and OT integration scope. Existing 90-well edge systems shall also be integrated as specifically required under Clause 4.2.1.3.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
		SCADA servers.		
25	**123/307**	NOTE 4 4. Telecom infrastructure between IoT & edge devices, including but not limited to LTE/4G/5G connectivity, network heat map assessment, licensed radio systems, microwave links, VSAT connectivity, leased lines, or associated recurring telecom charges will be managed by the bidder.	Except IOT nad RTU , We request OIL to keep , all other things mention here, out of bidder's scope as SIM card etc to be purchased in OIL's name. Kindly evaluate.	Not accepted. The complete telecom infrastructure and recurring charges are in bidder scope

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
26	**124/307**	Remote Site Connectivity and Data Resilience The Bidder shall design, provision, operate and maintain the complete connectivity required for transmission of data between the field gateways/edge devices and the OT Data Lake/DOF platform, including all telecom equipment, routers, modems, antennas, SIMs, subscriptions, recurring charges, security components and associated services.	Kindly keep SIM subscription in OIL's scope.	Not accepted. SIMs, subscriptions and recurring connectivity charges are in bidder scope
27	**126/307**	D. Bidder Sizing Submission	Please inform OT layer (Edge/ RTU, FI, Sensor , Gateway , Switches, F/w) level redundancy requirement.	Redundancy will be applicable Gateways, Antennas and interconnecting cables. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.
28	**129/307**	4.2.5.1 The system shall support both integration with existing SCADA / Automation systems (via Modbus, or MQTT).	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope and OIL to please share details of existing SRP Panel to estimate augmentation/retrofit, integration BOM/ service.	Not accepted. Integration with existing SCADA is in bidder scope. Existing SRP panel details shall be assessed during site survey and detailed engineering.

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
29	**129/307**	4.2.5.1 The solution shall be designed as a true retrofit for legacy mechanical SRP units with Direct Online Starters or pump panels, requiring no major structural changes to the pumping unit itself.	OIL to please share details of existing SRP Panel to estimate augmentation/retrofit, integration BOM/ service.	Relevant available data will be provided. Bidder is suggested for site survey for exact assessment.
30	**129/307**	4.2.5.2 Integration, Security, and Operations -The solution shall integrate seamlessly with existing SCADA, historians, enterprise platforms, or Digital Oil Field (DOF) platforms via MQTT, providing local HMI for field operators, remote monitoring/visualization through dashboards, predictive alerts, and support for remote operations and predictive maintenance.	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	Not accepted. Integration with existing SCADA, historians and enterprise/DOF platforms is in bidder scope

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
31	**130/307**	4.2.6.1 Plunger Lift Optimization Automate shut-in, build-up, open-flow, and after flow stages. Enable remote start/stop of cycles through plunger lift controller (RTU): MOV with fail-safe position. Solenoid-operated valve control. Local manual override.	WE understand that these instruments/hardware items have been included in Instrument list provided by OIL vide Annexure A and B. Kindly confirm.	Yes. Annexure-A includes actuated production valves, choke valves and autocatcher assemblies for 75 plunger-lift wells. Complete controllers/accessories remain in bidder scope. The EDGE-enabled autonomous Plunger Lift (PL) and Plunger-Assisted Gas Lift (PAGL) optimization system shall integrate a physics-based PL/well model within the IPSM and use real-time wellhead, production and plunger-cycle measurements to continuously determine the dynamic well operating state and autonomously optimize PL/PAGL operating parameters. For each applicable well, the bidder shall provide, integrate and commission all necessary instrumentation, control devices, communication interfaces and EDGE hardware required for closed-loop autonomous operation. The EDGE shall continuously assimilate these measurements into the IPSM to estimate well state and optimize, as applicable,

Sl. No.	Section	Clause Reference	Query	OIL's Response
				shut-in time, opening time, plunger arrival criteria, afterflow duration, cycle frequency and PAGL gas-injection rate, pressure and timing. Following each cycle, predicted and measured responses shall be compared and the model parameters shall be automatically updated/recalibrated where required. The system shall support closed-loop autonomous operation, while retaining configurable operating limits, operator approval/override, manual mode and fail-safe shutdown/fallback logic. All measurements, model predictions, control actions, parameter changes, alarms and optimization decisions shall be recorded in the EDGE/DOF platform for monitoring, validation, auditability and continuous optimization.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
32	**130/307**	4.2.6.1 Plunger Lift Optimization Data Acquisition & Integration: SCADA/Telecom integration (Modbus TCP, MQTT, RTU).	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	Not accepted. SCADA/telecom integration for plunger-lift optimization is in bidder scope.
33	**131/308**	4.2.6.1 Plunger Lift Optimization The hardware shall be suitable for hazardous area deployments where applicable and shall support relevant certifications (for example, ATEX / IECEx / Class I Div 2, as required by the site).		Hazardous-area hardware shall comply with OMR 2017 and the applicable certification requirements under Clauses 4.2.6.1 and 4.2.26
34	**132/307**	4.2.6.2 Enclosure, Panel, and Power The system shall support 24 VDC field power architecture, with power conditioning and optional backup power (UPS/battery) based on site needs	Pls share plinth wise availability of Power and existing power system details. UPS/ Battery back up time, redundancy design ?	OIL will provide available details, bidders are encouraged to visit site.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
35	**133/307**	4.2.6.6 Reliability, Fail-Safe, and Degraded Operation Fail-safe behaviour of production valves, choke valves, and automated auto-catcher shall be configurable per operating scenario and aligned with the Operator's safety philosophy.	Do we need to consider any hardware redundancy here? Pls advise.	Redundancy will be applicable Gateways, Antennas and interconnecting cables. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites.
36	**134 and 135 /307**	4.2.7-Gas-Lift Optimization & AGLO The I/O system shall support hot-swappable modules (where feasible) to reduce downtime during maintenance. The platform shall support redundancy options (as required by site criticality), including redundancy for CPU, power supply, communications, and I/O modules.		Bidder to specify, there is no terms from OIL side.
37	**137/302**	4.2.8-ESP Optimization Data Integration & Connectivity: Integrate with SCADA and DCS systems, Historians, VFD controllers and ESP sensors	Any h/w, s/w, services at existing SCADA end shall be in OIL's scope. Pls confirm.	Not accepted. Integration with SCADA/DCS, historians, VFD controllers and ESP sensors is in bidder scope

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
38	**140/307**	4.2.12-Visualization, Reporting & Decision Support Note: The bidder must ensure that the solution remains fully scalable to include all current wells as well as any future wells added during the contract tenure, with no extra cost implications beyond the contracted value.	We understand, this is intended from software point of view and not meant for hardware that will be required for well addition. Kindly confirm.	700 wells is the cap for the solution.
39	**143/307**	4.2.13.5 MPFM (Multi Phase Flow Meter) Note: In case of 02 nos. of SPFs wherein it is planned to install the MPFMs; two dedicated PCs for hosting the MPFM software, EDGE devices, RTUs, GSM modems shall be considered so that seamless data transmission takes place between the MPFM and SCADA through GSM.	Would like to understand the approcah/scheme in detail.	For the two SPF locations, the bidder shall provide dedicated PCs, edge devices, RTUs and GSM modems for seamless MPFM-to-SCADA transmission through GSM, as specified in Clause 4.2.13.5

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Sl. No.	Section	Clause Reference	Query	OIL's Response
40	**153/307**	4.2.18 (Installation scope) The Bidder shall be solely responsible for arranging Adapters, connectors, tools, or add-ons required for integration.	Any h/w, s/w, services for integrating with existing system at existing system end shall be in OIL/ Existing vendor's scope.	OIL will review and revert
41	**157/307**	Warranty, Guarantee and Support 1. The Bidder shall deploy resources for operations and maintenance to carry out regular ongoing work related to upgrades, updates, bug fixing and enhancements etc. The O&M shall be carried out by the bidder after Go-LIVE	Kindly remove Upgrade from scope.	Not accepted. Upgrades, updates, bug fixing and enhancements are part of O&M after Go-Live
42	**158/307**	4.2.24-Software Maintainability Requirements c. During the contract period and its extension if any, if the systems require operating system, software release upgradation and same is necessarily required then it shall be provided without any additional license, service cost implication to OIL.	Kindly remove Upgrade from scope.	Not accepted. Required operating-system and software-release upgrades shall be provided without additional cost

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
43	**159/307**	d. SOFTWARE ENHANCEMENT & SOFTWARE SUPPORT INCLUDING MINOR CHANGES IN GRAPHICS: S/W upgrade…	Kindly remove Upgrade from scope.	Not accepted. Software upgrades, new releases, enhancements and minor graphics changes are included in bidder scope
44	**160/307**	4.2.25-Instrument Maintainability Requirements a. The list of spares and details of activity for any type of maintenance are to be mentioned by the Bidder and must be agreed with OIL at the start of contract / project kick-off.	We understand that the required spares will be consumed from 10% spare as mentioned vide clause b below in this section. Any additional spare shall have additional cost implication and to be procured by OIL additionally.	Oil will review and revert
45		b. Bidder shall maintain 10% spares of the field instruments, edge devices & RTUs, deployed as part of the solution provided by OIL, in case of any emergency or regular maintenance breakdown.	Same as above	Oil will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
46	**161/307**	d. SOFTWARE ENHANCEMENT & SOFTWARE SUPPORT INCLUDING MINOR CHANGES IN GRAPHICS: d. The spares as and when required for maintenance during the tenure of the contract including minor / major repair or replacement of a part or whole shall be under the scope of Bidder.	We understand that spares will be consumed from the above 10% list.	OIL will review and revert
47		e and f e. Reinstallation of field instruments, replacement of impulse pipes, replacement of junction boxes, cable trays, erection hardware etc. f. Replacement of instrumentation cables, serial link cables, field bus modules etc.	We understand, these activities are meant for regular maintenance activities for installed instruments/system and not for "Well Conversion "scenario". Please confirm.	This is the regular maintenance, apart from that 30 instance are considered for migration.
48	**212**	54- Migration of Instruments -Migration of instruments from one location to another per site Lumpsum 30	We understand, 30 instruments per site/location may have to be migrated in total contract period. Instruments means those shall be supplied by the bidder and not existing instruments/equipment. Kindly confirm. We understand note in Page 227 is applicable here. Kindly confirm.	Each Asset/Field

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Sl. No.	Section	Clause Reference	Query	OIL's Response
49	**221**	Training- Instrumentation at site	10 Working days at each asset / or at one location. Kindly inform.	Instrumentation training at OIL site shall be for a minimum of 10 working days. The detailed schedule/location shall be mutually agreed
50	**163**	5.- AMC T&C Bidder shall be responsible for payment of cellular SIM card charges of the EDGE device during the AMC period and the same shall be included in the AMC invoice.	Pls take SIM and charges in OIL's scope.	Not accepted. Cellular SIM charges during AMC are in bidder scope and shall be included in AMC invoices
51	**163**	6 Bidder shall provide Oil India Limited a list of critical spares before completion of installation and commissioning for Gateway, Edge Device, RTU, Solar Panel based Power System.	Kindly inform if this is additional to the 10% spare mentioned in page no 160/307 , clause no a & b. And if yes, kindly inform if this spare will be part of evaluation or not.	OIL will review and revert

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
52		1. Instrument taping point	We have considered from Mechanical/ Process isolation valve	Not accepted. The bidder's installation scope includes all required tapping, isolation, fittings, line modifications and associated site work for a complete installation.
53		2. In-line instruments like Flow meters, valves installation scope	We have considered from Supervision of installation & commissioning	Not accepted. Installation and commissioning of inline instruments, including pipeline cutting/modification, is in bidder scope
54		3. Requirement of Asset Layout and P&ID	Please share the Asset Layout and P&ID to estimate the cable, cab tray, fitting accessories etc.	Asset layouts and P&IDs are not included in the tender. Site requirements shall be assessed during the mandatory visit and detailed engineering
55		4. VFD Selection	Please provide the VFD rating / duty or motor name plate details.	OIL will provide available relevant data

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
56		4.1.1 After installation, all instruments shall be integrated with the existing ABB SCADA RTU system available at each location. The bidder shall carry out all wiring, cable termination, and connections up to the existing ABB RTU panel. The complete termination up to the ABB RTU panel shall be within the bidder's scope of work. Wherever as necessary, bidder will also have to provide the marshalling panel at RTU along with all other accessories.	We are considering our scope limited to termination of signal & control cables upto RTU. Further programme and SCADA development of ABB RTU and SCADA system will be in OIL INDIA's scope. Kindly confirm.	Not accepted. Complete wiring, termination up to the ABB RTU panel and all engineering/interfaces required for SCADA integration are in bidder scope
57		COMMERCIAL CHECK LIST, point no. 5 SAC Code: GST .....%	We are considering 18% GST. Kindly confirm if you have any exemption from GST.	The bidder is responsible for quoting the correct GST rate and SAC classification. No specific GST exemption is stated; bids are evaluated including GST.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
58		4.2.7.3.4 Final Control Element (actuated choke / control valve)	Please provide the detailed specification and process data like : 1.Type of valve- pneumatic/Electrical/Hydraulic 2. Fail position 3. Line size/ pipe size 4. Media with detail composition 5. Flow rating - Min, Operating, Max. 6. Pressure - Min, Operating, Max. 7. Temperature - Min, Operating, Max.	OIL will provide line size, Operating Pressure/Temperature and Maximum flow. Bidder has to considering sizing assumptions
59		Annexure-A The quantity of instruments provided in the above list is tentative and may change. Bidders will have to visit OIL sites before price bid to assess the availability of instruments in field and the subsequent instrumentation requirement in order to achieve autonomous optimization as per their software. For crude oil application please consider Remote Seal type pressure transmitter	We are considering the instruments as per the BOM. Any changes to instrument quantities will be billed accordingly.	OIL will review and revert

ANNEXURE-1

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
60	**141 of 307**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter Local LCD display	Please confirm if wireless PT (remote seal and Direct mount) to be quoted with display or without display because Tender is asking LCD requirement for temperature transmitters and Flow meters only	Local display is required for pressure transmitter as well
61	**141 of 307**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal and direct mount wireless pressure transmitter Process pressure/Calibration range	Please confirm: 1. Static pressure (min, max) ranges: 2. Calibration range details for all the Instrument tags:	Tag-wise static and calibration ranges are not specified. These shall be finalized during detailed engineering based on process conditions
62	**141 of 307**	4.2.13.2 Wireless Gauge pressure transmitter with remote seal Remote seal: 5-meter length with armoured capillary. All accessories required to install the remote seal on the available process connection shall be provided by the bidder including nipple, counter flange etc	Please clarify the requirements of Nipple & counter flange in case bidder can offer Remote seal with threaded process connection. Please confirm whether 1/2" NPT-F process connection needs to be provided at instrument side or same shall be available at process side.	The process connection is 1/2-inch NPT(F). All accessories required to install the remote seal on the available process connection, including nipple and counter flange, are in bidder scope

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
63	**142 of 307**	4.2.13.3 Temperature Transmitters for wellheads and manifolds: Thermowell /RTD	For Temperature Elements & Thermowells, please provide tagwise following details - 1) Temperature sensor insertion length & Thermowell insertion length 2) Thermowell Process connection	Thermowell insertion length shall be checked during detailed engineering. Tag-wise process connection and insertion details shall be finalized during detailed engineering
64	**142 of 307**	4.2.13.3 Temperature Transmitters for wellheads and manifolds: Temperature transmitters	Please provide Calibration range details for all the tags	OIL will provide line size, Operating Pressure/Temperature and Maximum flow, Bidder has to considering sizing assumptions
65	**141/142 of 307**	4.2.13.3 Material test certificates	Please note that Material Test Certificate shall be applicable for temperature sensors and thermowell and for TT this is not applicable.	Material certificates to EN 10204 3.1 shall be provided as applicable for the supplied temperature assembly, including sensor and thermowell.
66	**211 of 307**	35. Wireless Gateways (redundant; antenna kits; cabling Wireless Gateways (redundant; antenna kits; cabling)	1. We understand that redundant gateway means redundancy of the gateway electronics (in the panel/JB), antenna (in the field), and cable between gateway and antenna. Kindly confirm our understanding. 2. Please confirm if the requirement is 100x2=200 nos. or 200X2=400no.s of redundant gateways	1. Redundancy will be applicable Gateways, Antennas and interconnecting cables. RTU redundancy is required for CPU, power, comms and I/O, with sub-50ms failover for all sites. 2. OIL will review and revert.

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
67	**150 of 307**	4.2.13.12 Flow meter for Gas lift with flow calculator Process details	1. Please provide tagwise following details to size for the Orifice a) Min., Max. & normal temperature, b) Min., Max. & normal pressure c) Min., Max. & norma flow details d) Line size and line schedule e) Gas composition ,Density, Viscosity f) Pipe moc details 2. Please confirm if flanges for orifice also to be supplied by the bidder or the same shall be in Oil India scope. 3. Any hot work/cutting/welding in the field for Thermowell/ Orifice the shall be Oil India's scope. 3. Please confirm on the approved vendor list for orifice . 4. Please confirm availability of straight run of 10D at upstream and 5D at downstream 5. Please provide Temperature element length details	Tag-wise process data and sizing shall be finalized during detailed engineering. The bidder shall supply the complete flow-measurement package, flanges/accessories and all cutting/welding/installation work. The EDGE-enabled Autonomous Gas Lift Optimization (AGLO) system shall integrate a physics-based well and Gas Lift model within the Integrated Production System Model (IPSM) and shall use real-time well, gas-lift and production measurements to continuously determine the well operating state and optimize gas-lift operation. For each applicable Continuous Gas Lift (CGL) and Intermittent Gas Lift (IGL) well, the bidder shall provide, integrate and commission all instrumentation, actuators, EDGE hardware and communication interfaces required for measurement-driven closed-loop autonomous optimization

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
68	**152 of 307**	Installation scope Installation scope	The tapping point as per the process connection mentioned for all devices in relevant specifications of the Tender shall be provided by Oil India , in case of any modified process connections/tappings shall be found during installation, same shall be organized by Oil India to match the Tender specifications.	Not accepted. All tapping, process/line modifications, cutting and installation required for the specified instruments are in bidder scope.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
69	**161 of 307**	4.2.26 Statutory requirement: All electronic / electrical instruments and equipment to be used in hazardous area shall fulfil the following: • Relevant OISD standards complement DGMS regulations for instrumentation: o OISD-STD-137: Instrumentation in Hydrocarbon Industry o OISD-STD-116: Electrical Safety Practices • Item shall be of a type and specification conforming to the relevant standards as specified in the Regulation 107(2) of Oil Mines Regulation-2017 and complying the provisions therein. • All instruments used in hazardous locations must be flameproof, intrinsically safe (IS), or explosion-proof. • Instrumentation and electrical systems shall have proper earthing and bonding, complying	Transmitters will be provided with IECEX Intrinsic safety certification as per Ex ia IIC, T4 alongwith PESO for Transmitters as well as for battery. Hope this understanding is correct	Compliance shall be as per OMR 2017 and Clause 4.2.26. IECEx/ATEX/NABL or permitted test reports and applicable statutory approvals shall be submitted.

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
		with relevant electrical standards in oil fields.		

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RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
70	**163 of 307**	5 ANNUAL MAINTENANCE – TERMS & CONDITIONS	Please confirm following: 1. Please confirm that field instruments like PT, TT and all the SMV/Multivariable flowmeters /DPT are not part of the AMC as spare for the same has been already asked by Oil India. 2. Wireless HART gateways do not have any inbuilt software and hence same is not required to covered under AMC.	OIL will review and revert
71	**157 of 307**	4.2.22 Warranty, Guarantee and Support	Please confirm that the Warranty of supplied Goods shall be 12 months from the date of commissioning and 18 months from the date of shipment	OIL will review and revert
72	**177 of 307**	Annexure-A (Sensorization of 380 Wells)	We request Oil India for the Location wise plinth details, Plinth-wise wells and it's respective applicable instruments for each well head.	Well plinth wise well list will be provided.
73		Due date extension	We request to kindly extend the bid due date of Tender offer submission for 4 weeks from the date of receipt of last pre bid query reply.	The BCD shall be extended suitably at OIL's discretion

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Sl. No.	Section	Clause Reference	Query	OIL's Response
74	**175 of 307**	Instrumentation in Phase-1 Factory Acceptance Testing and issue of acceptance certificate by OIL personnel (wherever applicable)	We request Oil India for Delivery of instruments shall be T1 + 11 month	Not accepted. FAT and supply timelines shall remain as specified under Clause 9.2
75	**142 of 307**	Magnetic Flowmeter	Tube material is considered of SS316L. Standard tube material for magnetic flowmeter is SS304 and flow tube as well as flange is not wetted part for magnetic flowmeter. Need clarification if SS304 flow tubes can be offered as SS316L is a non-standard requirement.	Not accepted. Magnetic flowmeter tube material shall be SS316L and flange material SS316/316L as specified.
76		Mass Flowmeter (NOC) For crude despatch line	1. Line size is indicated as 4" / 6" / 8". Request to confirm exact line size where mass flowmeters are to be installed. 2. Qty is indicated as 2 Nos. (One working, one standby) in specification. As per Page No. 211 total Qty of Coriolis Mass Flowmeter is indicated as 11 Nos. Request to confirm if Total 22 Nos. Mass Flowmeters are to be considered in total considering standby or 11 Nos. qtys are to be considered. 3. As per tender it is indicated that mass Flowmeters are to be calibrated	BOQ quantity is 11 Coriolis mass flowmeters. Calibration shall be at an ISO/IEC 17025 accredited gravimetric facility; FCRI calibration applies if the bidder lacks such a facility. Required bypass/strainer arrangement is in bidder scope. **NOC-Mass Flow meter line sizes will be provided.**

RESPONSES TO PRE-BID QUERIES AGAINST TENDER NO. CDG2752P27

Sl. No.	Section	Clause Reference	Query	OIL's Response
			at calibration rig accredited to ISO 17025 and FCRI calibration is not required if calibration rig is accredited to ISO17025. FCRI calibration is optional if calibration certificate shall be provided as per ISO17025. – Need clarification 4. As per Specification bidder to supply only strainer and reducer expander (If required). Request to clarify if bypass line with strainer arrangement is required.	
77	**210 of 307**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	Please confirm that MPFM and Sand monitor is an integrated Solution together to Provide integrated MPFM output Providing Gas, Oil, Water and Sand flow rates.	Sand monitor and CIU are not required.
78	**143 of 307**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please note that the Waxing & Crude build up should not affect Meter Performance. Thus the Meter body should be Full Bore Type, hope the understanding is correct	Tender specification prevails.
79	**143 of 307**	4.2.13.5 MPFM (Multi Phase Flow Meter)	Please confirm that MPFM should have Direct Density Measurement for Gas for better Overall Measurement Accuracy , Since Oil India wells are either Wet-Gas wells or Gas Lift Wells.	Tender specification prevails.

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Sl. No.	Section	Clause Reference	Query	OIL's Response
80	**210 of 307**	31 Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB Multiphase Flow Meter (MPFM) – incl. densitometer/CIU/sand monitor/DBB	Process data is not provided to allow us to perform meter sizing. If process data is currently not available, Oil India to advise the preferred meter size for the 11 units of MPFM.	Existing pipe sizes are 2-inch/4-inch/6-inch, Sch 80, 600# RTJ. MPFM line sizes will be provided.
81		4.2.13.6 Water Cut Meter	Process data is not provided to allow us to perform meter sizing. If process data is currently not available, Oil India to advise the preferred meter size for the 34 units of WCM.	Water-cut meter line sizes will be provided.

NOTE: Wherever, OIL's Response is marked as 'OIL will review and revert', it may please be noted that, in case there is no change after further internal review by OIL, no further clarifications shall be communicated against that particular clause. However, if any changes are found essential after review, it shall be notified through a Corrigendum issued against the tender.

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