Tender No: HCC/IS-05/PT-50/2022-23
E-Tender ID: 2022_MKTHO_153002_1

For

Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud Platform for IOCL Marketing Division for 5 years.

PART I: TECHNICAL BID & COMMERCIAL TERMS WITHOUT PRICE

Indian Oil Corporation Limited
(Marketing Division)
Head Office, Indian Oil Bhavan
Contract Cell Department, 6th Floor
G-9, Ali Yavar Jung Marg
Bandra (East), Mumbai –400051
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Terms and Abbreviations

AES	Advanced Encryption Standard
ALB/LB	Application Load Balancer/Load Balancer
API	Application Programming Interface
CI/CD	Continuous Integration/Continuous Deployment
CP	Consumer Pump
CSP	Cloud Service Provider
DB	Database
DDoS	Distributed Denial of Service
DNS	Domain Name Service
DW	Data Warehouse
ERP	Enterprise Resource Planning Tool
ETL	Extract Transform Load
FCC	Forecourt Controller
HA	High Availability
HSM	Hardware Security Module
HTTP/HTTPS	Hyper Text Transport Protocol/Secure
ICPAS	Integrated Consumer Pump Automation System
IDS/IPS	Intrusion Detection & Prevention System
IOCL	Indian Oil Corporation Limited
IRAS	Integrated Retail Outlet Automation System
JEE	Java Enterprise Edition
KSK	Kisan Seva Kendra Outlet
MDM	Master Data Management
MSP	Managed Service Provider
NoSQL	Non-Relational
OLAP	Online Analytical Processing
OLTP	Online Transactional Processing
OWASP	Open Web Application Security Project
PSU	Public Sector Undertaking
R&D	Research and Development
RDB	Retail Dashboard (IOCL Internal Application)
RDBMS	Relational Database Management System
REST	Representational State Transfer
RO	Retail Outlet
RPO	Recovery Point Objective
RTO	Recovery Time Objective
SDMS-CRM	Secondary Dealer Management System - Customer Relationship Management
SLA	Service Level Agreement
SLO	Service Level Objective
SOAP	Simple Object Access Protocol
SP	Service Provider (Same as MSP)
SQL	Structured Query Language
SSL	Secure Socket Layer/Transport Layer Security
TLS	Transport Layer Security

TPS	Transaction per Second
VAPT	Vulnerability Assessment and Penetration Testing
VCS	Version Control System
VPN	Virtual Private Network
VSAT	Very Small Aperture Terminal
WAF	Web Application Firewall
WSDL	Web Service Descriptor Language

1. NOTICE INVITING E-TENDER

Indian Oil Corporation Ltd. invites electronic bids from renowned vendors in prescribed tender form under two bid system (PART – I: **Technical bid with Commercial Terms without Price Bid and** PART – II**: Price Bid)** for **"Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud Platform for IOCL Marketing Division for 5 years" for Indian Oil Corporation Limited"** through its e-Tender portal https://iocletenders.nic.in as per details given below:

1	**TENDER NO** **TENDER ID**	**HCC/IS-05/PT-50/2022-23** **2022_MKTHO_153002_1**
2	**NAME OF WORK**	**Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud Platform for IOCL Marketing Division for 5 years.**
3	**TENDER FEE (Rs.)**	NIL
4	**EARNEST MONEY DEPOSIT (EMD) (Rs.)**	**EMD for this tender has been waived against requirement of submission of Bid Security Declaration in lieu of EMD. All bidders must submit Bid Security Declaration as per format attached in EXCEL SHEET**
5	**DOWNLOAD OF TENDER DOCUMENT FROM https://iocletenders.nic.in**	
	a) STARTS ON	**Please refer E-tender portal**
	b) CLOSES ON	**Please refer E-tender portal**
6	**PRE-BID CONFERENCE**	**Please refer E-tender portal for pre bid meeting scheduled date and time.** **In view of the present crisis due to Covid-19 pandemic, pre-bid meeting shall be done through video conferencing.** **Time: Jul 18 2022, 11:00 AM India** **Join Zoom Meeting** **https://zoom.us/j/96389641955?pwd=bWJvN1FiQnFwQ2g5bkttRjhKa0xNUT09** **Meeting ID: 963 8964 1955** **Passcode: 752442** **Bidders are requested to visit IOCL e-tenders website regularly for all the updates.** **Tenderers also to note that after the clarifications are given in Pre-Bid conference, no further deviation shall be permitted, and all decisions taken by IOCL in the pre-bid conference shall be binding on all bidders. Bidders may please note that IOCL shall not be under any obligation to respond to queries mailed after the date specified.**

		Pre-bid queries in advance may be mailed to the following persons: **Senior Manager (Contracts)** **E-Mail Id: rajeevranjan@indianoil.in** **Tel No. 022-26447275**
7	**DUE DATE AND TIME:**	
	a) e-TENDER SUBMISSION Start Date	**Please refer E-tender portal**
	a) e-TENDER SUBMISSION End Date	**Please refer E-tender portal**
	b) OPENING OF TENDERS (Technical Bid Only)	**Please refer E-tender portal**
8	**VALIDITY OF TENDERS**	**06 (Six) Months from date of opening of Technical Bid**
9	**WORK COMPLETION TIME/Delivery Schedule**	**Please refer "Delivery Period" Clause**
10	**CONTACT PERSONS**	**Senior Manager (Contracts)** **E-Mail Id: rajeevranjan@indianoil.in** **Tel No. 022-26447275**
11	**Names of the Independent External Monitors for this tender:**	• **Mr. Basant Seth,** • **Mr. Madhusudan Prasad** • **Mr. Vijai Prakash Pathak** **(Email: iem-ioc@indianoil.in)**

DEFINITIONS:

a) The following expressions hereunder and elsewhere in the Contract Documents used, unless repugnant to the subject or context thereof, shall have the following meanings hereunder respectively assigned to them.

b) The **"Owner", "Purchaser"** means Indian Oil Corporation Limited (also referred as IOC or IOCL or IndianOil) incorporated in India having their Registered Office at Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra East, Mumbai-400051 shall include their successors and assignees for orders placed by Indian Oil Corporation Limited.

c) **"Corporation", "IOCL", "IndianOil"**: Same as owner.

d) **"MOP&NG"** – Ministry of Petroleum and Natural GAs

e) **"BCP"**: shall mean Business Continuity Plan.

f) **"Vendor", "Successful Bidder"**: shall mean Individual, agency, Firm or Company (whether incorporated or not) selected by the OWNER for the performance of the Contract and shall include its legal representatives, successors and permitted assigns.

g) **"Bidder", "Bidders"**: shall mean any Person or Persons, Firm or Proprietor who participates in this tender indicating his / her / their interest & offering the Project / Work and its successful completion.

h) "**Supplies", "Project", "Work", "Services", "Solution"**: specified job(s) and/ or work(s) of this tender for delivery and installation of goods or services as mentioned in the tender.

i) "**Complete", "Completed"** (in the context of job(s) mentioned in this tender): wherever used to indicate completeness of the specified job(s) and/ or work(s) of the goods/services defined in the Bill of Material (BoM)& the Purchase Order / Work Order. It shall be deemed as incomplete if any component of the BoM or of the PO/WO are not supplied, delivered and installed, if supplied is not operational or not acceptable after examination or testing by IOCL in any respect.

j) The **"Contract"** shall mean the agreement between the parties as derived from the Contract Documents.

k) The **"Contractor"**: Same as Vendor.

l) **"Contract Period":** the pre-Go-Live, roll out and post Go-live AMC period which is 5 years from the date of Go-Live.

m) **"Stability Period":** Initial 1st Year of the AMC Period.

n) The **"Tender Fee"**: Fees paid for receiving the printed copy of the Tender.

o) **"EMD", "Earnest Money Deposit"**: Money (or equivalent) deposited along with, the Tender indicating willingness to abide by the rules of the Tendering process and assuring IOCL the Vendor's capability to take up the project and complete in stipulated time.

p) **"SD", "Security Deposit"**: Money (or equivalent) deposited with IOCL upon completion of delivery and installation of all the goods/services in the Purchase / Work Order as a performance guarantee for the quality of the goods and other services to be rendered during the warranty period.

q) **"LOI", "Letter of Intent"**: Letter of intent given by IOCL to the successful bidder of the tender expressing interest and intention for entering into a contract with the successful bidder for carrying out the proposed job(s) mentioned in the tender.

r) **"BoM", "Bill of Material"**: Item or items of the nature of Goods/Services including Licenses for using them that are intended to be procured through the tendering process.

s) **"Officer-in-charge" or "Iocl's Representative"**: The Officer in charge shall primarily refer to the officer of IOCL to whom this tender is submitted, or any other officer within the same department who has been designated by him/her from time to time to handle the proceedings of this tender.

t) **"FCC", "Automation Server"**: FCC or Automation server shall refer to the Fore Court Controller server installed in the Retail Outlets which transfers the data from automation network to the Central Server at IOCL DC / DR.

u) **"Full Managed Service/ Serverless":** Cloud service provider shall allow users to use services without the hassle of worrying about the underlying infrastructure. IOCL does not require any setup and all admin related activities like backup, patching and availability is being taken

care by cloud service provider/OEM. Services is charged basis on resources allocated for the services / Actual resources consumed.

v) IndianOil intends to issue this bid document, hereinafter called Request for Proposal or RFP, to the vendor, to participate in the tender for **"Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud platform"** for IOCL Marketing Division for 5 Years.

w) This document is meant for the exclusive purpose of bidding as per the terms, conditions and specifications indicated and shall not be transferred, reproduced or otherwise used for purposes other than for which it is specifically issued.

1.0 Pre – Qualification Criteria:

Bidders meeting the following qualifying parameters as per details mentioned below, only need to apply:

1.1 Similar Work Criteria:

1.1.1 Definition of Similar Work:

Experience in successful completion of the following during last 5 years from the last day of the month previous to the one in which tenders are being invited shall be taken as "similar works" for the purpose of qualification:

Configuration or Execution or Setting up of Software Projects/Platform involving Data Ingestion or Data Integration or Analytics or Data Lake or Data Management or Big Data or Data Warehouse on Public Cloud Platform.

OR

Experience in Bespoke Software Application Development, and implementation on Public Cloud. The Software application should have been built using any of the mentioned Cloud Platform Services viz Datawarehouse, Container Platform, API Gateway, API Management Platform.

Note:

I. Supply of only off-the-shelf Visualization/ Analytics software shall not be considered for similar work.
II. Only supply of licenses (where no other service component is involved) will not be considered.
III. Only cloud billing projects also cannot be considered. The Cloud billing projects should have some component of a solution. (Similar to the above definition of similar work)

1.1.2 MONETARY LIMITS:

The value of similar Works should be as under:

For Non-MSE Bidder:
One completed work costing not less than Rs. **27.94 Cr. OR**
Two completed works each costing not less than **Rs. 22.35 Cr. OR**
Three completed works each costing not less than **Rs. 16.76 Cr.**

For MSE Bidder:
One completed work costing not less than Rs. **23.75 Cr. OR**
Two completed works each costing not less than **Rs. 19.00 Cr. OR**
Three completed works each costing not less than **Rs. 14.25 Cr.**

All the above amounts are inclusive of taxes/GST.

a) In cases, where work order contains items other than those defined as similar work in the same work order, then only the value of the work mentioned against similar work shall be considered. In cases, where value of work against similar work is not clearly mentioned, Bidder has to provide certificate from the client clearly mentioning the value of the work

as defined above. (To be read in-conjunction with note to similar works).

b) Work order may contain single work or combination of one or more work as mentioned above in similar work definition.

c) Also, all associated cloud services/work/solution related to similar work shall be considered for calculation of value of the work.

1.1.3 Documents submission against Similar Work criteria:

In case of Work Order from Government Bodies / PSUs:

1. Copy of work order (s) /Contract document (s). **AND**
2. Completion Certificate (s) **OR** Copy of duly certified bill (s) / Invoice from client.

In case of Work Orders from Private Parties:

1. Copy of work order (s) /Contract document (s). **AND**
2. Completion Certificate (s) **OR** Copy of duly certified bill (s) / Invoice from client. **AND**
3. Certificate from CA certifying value of work done with Relevant TDS Certificates (where applicable) OR Bank Statement.

The Completion Certificate (s), submitted by the bidder should be on Client's letter head indicating:
(a) Work Order reference.
(b) Brief of work.
(c) Contract period.
(d) Date of completion
(e) Completed Value of work, for each work order being claimed.

IOCL will reserves the right to confirm the details submitted by the bidder directly from the client.

1.1.4 Notes to definition of similar works:

a) For the same project finalized against one tender or RFP, if separate orders for supplies or services or variation orders or amendment orders or extension orders are issued in continuation of the original purchase/work order/contract, then the total value of works completed against the supply & installation components of the original work orders, subsequent variation/ amendment /extension orders put together shall be accepted as one single work completed.

b) Work carried out at multiple locations through a single Purchase order or multiple purchase orders finalized against one tender shall be considered as one similar work for the purpose of qualification.

c) Ongoing works with executed value of works completed up to the period mentioned in the tender as mentioned under similar works will be considered.

d) Bids by Consortium or MOU parties shall not be accepted. Also credentials of Consortium or MoU Parties submitted by one of the Consortium partners shall not be accepted.

e) JVs registered under the Indian Companies Act as on date of submission of bid are permitted. In such cases, all credentials to be submitted for qualification in the tender shall be in the

name of JV.

f) Similar works carried out by the Bidder only in India or abroad shall be considered. For the works carried out abroad and payments received by the Bidder in foreign currency, proof of remittance shall also be required and the same will be converted to INR by the bidder based on exchange rate as per SBI TT Selling rate up to the last day of the month previous to the one in which tenders are being invited shall be considered for the calculation of Work order/completed value amounts.

g) The monetary limits towards value of completed works mentioned for Single/ Two/ Three similar work order(s) indicated in the NIT shall be inclusive of all Taxes.

h) If any of the documents are in language other than English, the same needs to be translated in English, duly notarized (if in India)/ notarized or authenticated (if in foreign country)

i) In case bidder expresses its inability to submit necessary documents i.e. copies of work order and completion certificate for reasons of Non-Disclosure Agreement (NDA) or other reasons (clearly specifying the reasons) in support of meeting the experience criteria, a certificate, in original, certifying all the required information (i.e., details of similar work, Contract period, Completed value of work, completion date), issued by CEO / CFO / MD / Country Head / or equivalent officer (as certified by Company Secretary of the company) of the company along with a declaration that the bidding company is not in a position to submit the required documents owing to the NDA or other reason, may be submitted.

   Such certificate should be endorsement by Chartered Accountant/ Statutory Auditor (not being an employee or a Director or not having any interest in the bidder(s) company/ firm).

   However, proof of payment vide TDS certificate (where applicable) or bank statements certified by CA Certificate shall still be needed in case of work done for Private Parties.

j) Bidding Company's Profile: In case, Bidder is a Group Company, then credential of Parent/Group companies can be considered to establish the PQ Criteria and QCBS evaluation.
   Group companies are defined as under:

   Group Company - Parent Company and Direct Subsidiaries: If the Parent Company directly holds 51% or more of the equity share capital in their subsidiary companies, then such subsidiary companies are called direct subsidiaries and shall be considered as part of group companies.
   Documents required in evidence of group-company:
   • Company profile
   • Annual report
   • Letter from the Parent /Subsidiary Company giving details of holding.
   • Certificate by the bidding entity mentioning that they would be able to draw international resources/expertise from parent/subsidiary as and when required to fulfill commitments.

k) Experience of the member of same network* or member of same global firm shall also be acceptable provided a certificate is given by the bidding entity mentioning that they would be able to draw international resources/expertise from them as and when required to fulfill commitments.

   *The parent company of the bidder, or subsidiary company of the bidder, or subsidiary of the parent group organization shall be considered as member of same network or member

of same global firm.

l) For works carried out outside India, completion certificate/ acceptance report from their clients clearly mentioning the executed (completed) value of work and the date of completion may be accepted as a document against proof of completion for works. The requirement of CA's certificate of work done value with TDS/ bank statement shall not be applicable for such works.

m) No price/relaxation or purchase preference shall be provided to MSEs, Start-ups since the subject work is related to critical operations which includes working of Retail Automation, Daily price push, etc. which forms the backbone of the IOCL Retail Network, and the work involved is not advisable to be further divided among multiple parties.

1.1.5 Applicability of participation by Bidder/OEM:

a) Each tenderer can submit only one bid.
b) In a tender, either the bidder on behalf of the Principal/ OEM or Principal / OEM itself can bid, but both cannot bid simultaneously for the same item /product in the same tender.
c) If a bidder submits bid on behalf of the Principal/ OEM, the same bidder shall not submit a bid on behalf of another Principal/ OEM in the same tender for the same item/ product.

1.2 Annual Turnover:

Minimum annual turnover of **Rs. 6.71 Cr. (For Non-MSE Bidder) or Rs. 5.70 Cr. (For MSE Bidder)** in any one of the three financial years i.e., 2018-19, 2019-20 & 2020-21 in case, the bidder is following calendar year as their accounting year, the equivalent period for considering annual turnover is 2018, 2019 & 2020.

Documents submission against annual turnover requirement:

Audited Balance Sheets (Profit & Loss Account Statement) indicating annual turnover duly certified by the authorized signatory. The balance sheet copy MUST bear the Registration Number of the authorized Chartered Accountant and its SEAL. This is not applicable for published annual reports.

In case, bidder is not required to get its account audited under section 44AB of the Income Tax Act, 1961, certificate from practicing chartered accountant (s) towards the annual turnover of the bidder along with copies of Income Tax Returns shall also be acceptable.

In case of non-availability of audited balance sheets (Profit & Loss Account Statement)/ published accounts of the FY 2020-21, then the bidder to submit the audited balance sheet (P&L Statement)/ published account of **FY 2017-18**.

Provisional Balance Sheet and P&L account statement will not be considered for evaluation.
Definition of Turnover: Total Revenue as per Schedule III of Companies Act, 2013 (Earlier revised Schedule VI of Companies Act, 1956) shall be considered as Turnover.

1.3 Minimum Technical Eligibility Criteria for bidder;

S.No.	Point	Supporting document to be submitted

1.	Bidder shall submit Manufacturer's Authorization Form (MAF) from respective CSP (Cloud Service Provider) to participate in this tender.	MAF from CSP.
2.	SI/Bidder Should have the following Valid Certifications: · CMMI Level 5 · ISO 27001 for Security · ISO 9001 Quality Management CMMI and QMS should include Software development/ delivery as a scope.	Letter from SI along with relevant applicable certificates.

1.4 Other Commercial Criteria:

Following criteria will also be considered for commercial evaluation:

a) PAN card
b) GST Registration certificate
c) Partnership deed or Certificate of Incorporation with memorandum & articles of association.
d) Power of Attorney / Board resolution (as applicable) in favour of Tender signing authority.
e) Integrity Pact Agreement (if applicable)
f) Standard declarations (as applicable)
g) Details of Relationship with Directors of IOCL,
h) Details of employing Retired IOCL Directors,
i) Declaration for Blacklisting/Holiday Listing,
j) General Declarations and
k) Proforma of Tender Not Tampered.

1.5 QUALIFICATION W.R.T. PP-LC (Purchase Preference – linked with local content)

Both Class-I and Class-II local suppliers are eligible to bid.

No Purchase Preference shall be given to Class-I bidder since evaluation of bid is based on Quality cum Cost-Based Selection (QCBS) and the work is Indivisible by nature.

Bidders to submit compliance certificate/declarations as per guidelines mentioned in Circular reference no: FP-20013/2/2017-FP-PNG dt. 17-11-2020.

Determination of Local Content, Sanctions, Certification and Verification are applicable as per the MoPNG PPLC circular dated 17th November 2020. Declaration by Bidder and Certification by the statutory auditor / Chartered Accountant of the bidder as per format **Annexure-F** in the Bid to be submitted.

1.6 Restriction for Bidders from countries which shares a land border with India:

a) Restriction from participation in bids in line with Amendment in Rule 144 (xi) in the General Financial Rules (GFRs), 2017:

Any bidder from a country which shares a land border with India will be eligible to bid in this tender (as per definition specific to this clause and attached as **Annexure-G** only if the bidder is registered with the Competent Authority. Copy of the registration certificate is to be submitted along with the bid and enclosing declaration as per **(ATTACHED EXCEL SHEET)**

1.7 General:

PQC Evaluation shall be done based on submitted documents and in case required, only additional supporting documents/clarifications within fixed time frame would be sought from the bidder.

"Notwithstanding any other condition/ provision in the tender documents, bidders are required to submit complete documents pertaining to PQC along with their offer. Failure to meet the PQC will render the bid to be summarily rejected.

IOCL reserves the right to complete the evaluation based on the details furnished by the bidder, with or without seeking any additional supporting documents/clarifications"

IOCL's decision on the evaluation of the bids based on the uploaded submitted pre-Qualifying documents and Technical Eligibility Criteria documents shall be final and binding on the bidders. Indian Oil Corporation reserves the right to accept / reject any or all tenders without assigning any reason whatsoever.

1.8 SUMMARY REJECTION

The tenders of the vendors falling in any one of the below will be summarily rejected:

a. Non-Submission of Bid Security Declaration.
b. Invalid NSIC / MSE exemption certificates.
c. Not meeting the required PQ Criteria of the tender and Technical Eligibility Criteria of the tender.
d. Submission of forged or false documents / information by any Bidder shall make their offer invalid. In addition, action shall also be taken by IOCL for putting the Bidder on Holiday list.
e. The bidder has to give declaration in a prescribed format that he / it / they is / are not under any Holiday List / Blacklist declared by the OWNER or by any Department of the State or Central Government or by any other Public Sector Organization and that there is no inquiry in respect of any corrupt or fraudulent practice pending against him / it / them. In case he/ it / they are under any such list, or any inquiry is pending he/ it / they shall in the declaration give full details thereof. Such Declaration in respect of a partnership firm or association of persons shall cover every partner or member of the association and in the case of Company shall cover every Director and Principal shareholders of the company and any Holding Company and/or Subsidiary Company(ies) if any.

   The tenders of such vendors who are under the holiday / blacklist of Indian Oil will be summarily rejected.
f. For vendors who are under the holiday list of any Department of the State or Central Government or by any other Public Sector Organization, if a communication is received from the Administrative Ministry of IOCL to ban a party from dealing with IOCL, the party shall be automatically put on Holiday list and their tender will be summarily rejected.

   Holiday listing by other PSUs / Government Departments shall not automatically extend to IOCL unless the Administrative Ministry of IOCL advised for the same after undertaking due diligence and process.

2.0 Evaluation Criteria

2.1 Evaluation of Techno Commercial Bid:

The objective of this Evaluation methodology is to facilitate the selection of the most effective bidder to meet the Business requirements of IOCL.

Evaluation of the bidders would be done in the following two stages:

Stage 1:

i. Initial technical evaluation would comprise of examination of the submission of all proposals and supporting documents as required in the Tender Document.

ii. All relevant annexure and documents in support of various requirements as per the relevant section also need to be provided along with the Technical Bid. All these documents will be used for technical evaluation.

iii. Upon receipt of the bids, the documents submitted by all the parties shall be scrutinized with respect to submission of bid security declaration, PQC, other necessary documents, acceptance to all terms & conditions as per the tender. The offers shall be scrutinized and on the basis of the uploaded documents in tender portal.

iv. Bid is liable to be rejected in case of any deviation w.r.t to technical specification requirements or in case of non-submission of annexure, declaration and Documents as required in tender.

v. Notwithstanding any other condition / provision in the tender documents, bidders are required to submit complete documents pertaining to PQC along with their offer. Failure to meet the PQC will render the bid to be summarily rejected. IOC reserves the right to complete the evaluation based on the details furnished by the bidder, with or without seeking any additional supporting documents/clarifications.

vi. Any clarification required by IOCL will be uploaded in the portal and bidders have to upload signed copy of their replies in the portal itself.

vii. Only Bidders shortlisted as per the defined pre-qualifying criteria and other requirements under Technical Bid shall be evaluated for detailed Techno-Commercial parameters in stage 2.

Stage 2:

i. Based on the documents submitted as part of PQC and additional documents as required for techno commercial evaluation, marking will be done for bidders who have met the pre-qualifying criteria.

ii. As part of techno commercial evaluation, Business Presentation is to be made by bidder to the Senior Committee of IOCL Officers

iii. Bidder(s) would be called for presentation at a notice of minimum 7 days. The presentation should be made by proposed team who shall be working on this assignment with INDIANOIL. A signed copy of the presentation needs to be submitted on this day for evaluation purpose.

iv. Presentation of the bidders would be evaluated by a committee of Senior IndianOil Officials. The marks awarded by the committee shall be final and no representation shall be made by any bidder at any point of time.

v. Overall marking for techno commercial evaluation will be done on as per the table below:

S.No.	Criteria	Parameters	Documentary	Total Marks
A. Presentation and Demonstration				**Out of 30**
1.	**Functional understanding of IOCL Business Processes and requirement of the solution.** ***Presentation should be given by Lead partner/Domain Expert***	Bidder is required to make a detailed presentation on the proposed solution for IOCL covering: • Business Process including the Integration with Retail Outlets. • Application Portal and Sub Modules • Understanding of all Real-time and batch processes, reporting, external endpoints, integration and exchange of data with external endpoints. • The functional details of the applications including stakeholders, functional architecture, underlying technologies / platforms, underlying software, security, and privacy requirements. • Understanding of Scope of Work, deliverables & business context for deployment of solutions at IOCL and showcasing optimal business processes to cater to business need and future adaptability to new business requirement.		7.5
2.	**Technical capabilities of proposed solution** ***Presentation should be given by Lead partner along with Technical Manager***	Bidder is required to make a detailed presentation on the proposed solution for IOCL covering: • The technical details of the applications including technical architecture, integration with external solutions, underlying solution and protocols used. • Technical Capability of proposed CSP, and PaaS. • Solution Technical details along with Demonstration (SOAP API Ingestion - Scale, Data Recency & Reporting) using any sample data. • Technical Solution components with key performance parameters.		15

		• Solution components with API Management, API backend, Devops, Micro Service Model and Data-warehouse. • Security Architecture, High Availability, RTO-RPO. • Change Management. • Service Management. • Exit Management & Migration		
3.	**Bidder's Work plan and Quality of Approach** ***Presentation should be given by Lead partner along with Project Manager***	Bidder is required to make a detailed presentation on the proposed solution for IOCL, covering: •Robustness of work plan, approach & methodology to meet objectives and timelines of deliverables. Use of tool based Project management •Project Execution Planning and Methodology including the post go-live support period •Resource Planning and Nos of technical expertise and resources aligned for the project. •Project Governance •Post Go-live and Support Rollout		7.5
B. SI/Bidder Capability				**Out of 10**
1.	Presence of bidder in any of last 3 report of Gartner Magic Quadrant for Public Cloud IT Transformation Services 2021/ Public Cloud Infrastructure Professional and Managed Services 2019, 2020	Leader Quadrant: - **5 Marks** Challengers Quadrant: - **4 Marks** Other Quadrant: - **3 Marks** Not Present: - **0 Marks**	Relevant report of Gartner MQ	5

2.	**Technical Skill Set** Cloud certified personnel Employee strength globally as on 30 days before the bid submission date. *Employee strength based on the company/(ies) as defined in the Similar works	Number of Cloud Certified personnel (Only Valid certificate from CSP will be considered) on the payroll of Bidder More than 150 (in the offered CSP) and more than 300 (in at-least two other CSPs): - **5 Marks** More than 100 (in the offered CSP) & <= 150 and more than 200 an <= 300 (total in at least two other CSPs): **- 3 Marks** Others: - **0 Marks**	Declaration submitted on the company letter head signed by authorized signatory.	5
C. Past experience of the firm				**Out of 30**
1.	Nos. of Project on Data Ingestion/Data Analytics platform implementation on cloud in India or outside India.	No. of such project each of value INR 15 Cr or more in the last 5 years up to the last day of the month previous to the one in which tender was released. More than 5 = 10 marks Between 2 to 5 = 5 marks Less than 2 = 0 Marks	Documentation as mentioned in **Note A** below.	10
2.	Supply and implementation of Bespoke application development projects in India or outside India	No. of such project each of value INR 15 Cr or more in the last 5 years up to the last day of the month previous to the one in which tender was released. More than 5 = 10 marks Between 2 to 5 = 5 marks Less than 2 = 0 Marks	Documentation as mentioned in **Note A** below.	10
3.	Supply and implementation of scope of work same as similar work definition mentioned in para **1.1.1** in **proposed public cloud** in India or outside	No. of such project in the last 5 years up to the last day of the month previous to the one in which tender was released. More than 5 = 10 marks Between 2 to 5 = 5 marks Less than 2 = 0 Marks	Documentation as mentioned in **Note A** below.	10
Note A: Documentation to be submitted in similar line as asked in Pre-qualification Criteria (Refer Point No 1.1.3 and 1.1.4)				
D. Experience of key personnel who will be deployed on the project				Out of 15

1.	**Role: Lead partner or Domain Expert or Project Leader or Subject Matter Expert or equivalent*** Total experience should be minimum 15 years	**Assignment as a Lead Partner:** Implementation of projects more than INR 10 Crore having scope of work same as similar work definition mentioned in para **1.1.1** One mark for each assignment subject to maximum 5	Documentation as mentioned in **Note B** below.	5
2.	**Role: Project manager*** Total experience should be minimum 10 years Total project management experience shall be minimum 3 Years	**Assignment as Project Manager:** Implementation of projects more than INR 10 Crore having scope of work same as similar work definition mentioned in para **1.1.1**. One mark for each assignment subject to maximum 5	Documentation as mentioned in **Note B** below.	5
3.	Experience of following key personnel to be deployed in the project* **Role:** (1) Cloud Architect (2) DevOps Specialist (3) Data Platform Specialist (4) API Platform Specialist (5) Security Specialist Cloud Architect should be certified on the offered CSP (Only Valid certificate from CSP will be considered) and Other Key Personnel shall have experience on the offered platform. They should be committed for the project for the entire duration of the implementation period.	Above 5 years of total experience and 3 years of relevant cloud /technology experience = 5 marks 4 Years of total experience and 2 years of relevant cloud experience = 3 marks Other = 0 Marks	Documentation as mentioned in **Note B** below.	5

*Bidder shall have backup resources in similar role and with same required experience of primary resource, which shall be deployed for the project when the primary resource resigns from the company.

Note B:
Total and industry experience to be certified by authorized signatory of the bidder.

Project Experience to be submitted in the form of work order or completion certificate from the client.

E. CSP and Cloud Platform				Out of 15
1.	Proposed CSP should be in latest report of Gartner MQ for Cloud Infrastructure & Platform Services	Leader Quadrant: 5 Marks Other Quadrant: 2 Marks Not Present: 0 Marks	Relevant report of Gartner MQ	5
2.	Proposed Platform / Solution should be in latest report of Gartner MQ in any of the quadrant for any five (5) of following categories:	1. Full Life Cycle API Management 2. Data Integration Tools 3. Web Application and API Protection 4. Network Firewall 5. Application Performance Monitoring (APM) 6. ITSM Tool **1 Marks for each Point**	Relevant report of Gartner MQ	5
3.	Proposed Data Warehouse Solution should be mentioned in Leader Quadrant in latest report of Gartner MQ of Cloud Database Management Systems	Leader Quadrant: **5 Marks** Other: **0 Marks**	Relevant report of Gartner MQ	5

Summary of Marking:

Points	Marks
A. Presentation and Demonstration	**30**
B. SI/Bidder Capability	**10**
C. Past experience of the firm	**30**
D. Experience of key personnel who will be deployed on the project	**15**
E. CSP and Cloud Platform	**15**

Financial proposal (Price Bid) shall be opened for bidders having **relative score** of minimum 70 marks in overall. (Quality parameters)

Relative Score Calculation:
Relative Score for Bidder A = $T_A/T_{High} \times 100$
T_A = Techno-Commercial Score of Bidder A,

T_{High} = Highest Techno-Commercial Score,

Evaluation of Price Bid:

i. INDIANOIL evaluation committee will determine whether the price bids are complete, correct and free from any computational errors and indicate correct prices in local currency (Indian Rupee - INR).
ii. The bidders are required to quote as per the BoQ. The bidders must quote price for each line item in the Price Bid. Blank or omitted items will be considered 'Nil' and treated as having Zero value.
iii. The evaluation shall be inclusive of quoted GST rates and bidder will be under obligation for quoting/charging correct rate of tax as prescribed under the respective Tax Laws. The applicable GST as per IOCL estimate is 18%.
iv. No counter conditions should be included in price bid. Conditional price bid shall be summarily

rejected.

v. IndianOil reserves the right to evaluate the bids based on reasonability and workability of the offer.

vi. No price or purchase preference shall be provided to MSEs, Startups, NSIC, PSUs (State & Central) & JVs of IOCL, since the subject works is service in nature and is an indivisible work contracts by nature.

vii. For Evaluation purpose ONLY, the costing of the following line items mentioned in BoQ would be considered at following minimum percentage:

S.No. in BoQ	Item	Minimum Price	Maximum Price
4.01	Support And AMC Cost - For 1st Year- After Go-Live	Price for line item 4.01 shall be minimum 20% of overall development cost (i.e., 20% of total Price of line item 1.05, 1.06, 3.01 and 3.02	Price for line item 4.01 can be maximum 40% of overall development cost (i.e., 40% of total Price of line item 1.05, 1.06, 3.01 and 3.02)
4.02	Support And AMC Cost - For 2nd to 5th Year-After Go Live	Per year Price for line item 4.02 shall be minimum 10% of overall development cost (i.e., 10% of total Price of line item 1.05, 1.06, 3.01 and 3.02	
5.01	Solution Migration cost to a different MEITY CSP	Total price under line item 5.01 shall be minimum 25% of SI development cost (i.e., 25% of total price of line item 3.01 and 3.02)	
4.07	Tools and Solution Management- After Go-Live	Total price for line item 4.07 shall be minimum 10% of SI development cost (i.e., 10% of total price of line item 3.01 and 3.02)	

Bidders to offer their proposals accordingly. In case the offered bid values of these line items are not in line with the above, for price comparison percentages as mentioned above will be applied for the price comparison.

Combined Techno-Commercial and Price Bid Evaluation:

The Evaluation of tenders shall be done in ratio of **70:30, that is, 70% weightage to Techno Commercial Bid (quality parameters) and 30% weightage to cost**.

In order to qualify for financial bid opening, a bidder should **mandatorily have relative score of minimum 70 in Technical (quality parameters).**

In respect to the qualified bidders, in whose case, the financial bid shall be opened; a combined technical and price bid evaluation will be done as per **QCBS Method** as per details below:

QCBS Method

Combined Score of Bidder A

$S_A = T_A/T_{High} \times 70\% + L_{Low}/L_A \times 30\%$

Where S_A = Combined score of Bidder A,

T_A = Techno-Commercial Score of Bidder A,

T_{High} = Highest Techno-Commercial Score,

L_A = Evaluated Bid Price of Bidder A,

L_{Low} = Lowest of all evaluated Prices among responsive bids

The bidder with highest combined score shall be ranked H-1 followed by proposals securing lesser marks as H-2, H-3 etc. The proposal securing highest combined marks and ranked H-1 will be invited for negotiations, if required and shall be recommended for award of contract.

In the following table: technical and price bid evaluation process has been illustrated below:

For illustration purpose, to qualify for financial bid opening, a bidder having relative technical score of minimum 70 marks in Technical have been considered (quality parameters).

Sr. No.	Bidder	Tech. Score (T)	Relative Tech. Bid Score (T/THigh x 100)	Price Bid (in Lacs) (L)	Relative Price Bid Score (LLow/L x 100)	Combined Techno-Commercial & Price Bid Score		
						70% x Column (ii)	30% x Column (iv)	Column(v) + Column(vi)
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	
1	A	88	100	600	75	**70**	**22.5**	**92.5**
2	B	80	90.91	500	90	**63.64**	**27**	**90.64**
3	C	76	86.36	450	100	**60.45**	**30**	**90.45**
4	D	59	67.04	NA	NA	**NA**	**NA**	**NA**

Bidder 'D' did not qualify Techno-Commercial evaluation as it did not meet the minimum qualifying marks relative score of 70 marks. Bidders B & C were not the highest combined scorer (i.e., Techno- Commercial Score + Price Bid Score), thus not given preference.

Bidder A is highest combined scorer, thus H-1 bidder and would be given preference for further negotiation (if applicable) and award.

Tie Breaker:

In case, combined Techno-Commercial & Price Bid score of two (2) of more bidders are identical, then the bidder scoring higher Price Bid score would be considered as successful bidder.

In case of identical Techno-Commercial & Price Bid Scores, revised price Implication as discount on the earlier quoted price shall be obtained. In the event of further tie, party with highest turnover in any of the last three financial years shall be considered as the successful bidder.

If Annual Turnover is not furnished for any of the last 3 financial years, then the same shall be treated as NIL for that particular year and the highest turnover will be worked out accordingly.

Verification of documents:

i. Technical qualification of the bidders shall be based on document / credentials submitted by bidder(s) in the tender.

ii. Document verification with originals shall be carried out after opening of price bids for the short-listed bidder(s) only. Since documents are submitted by the bidder(s) in the tender, the responsibility of authenticity of documents shall be with the bidder(s).

iii. Shortlisted bidder(s) shall be required to present their original documents to the tender inviting authority within a period of 7 days from the date of intimation by IOCL.

iv. Recommendation for award of contract shall be made only after verification of documents with originals of the shortlisted bidder(s).

Negotiation with successful bidder

i. Negotiations are not conducted as a matter of routine. However, IndianOil reserves the right to negotiate with the successful bidder. The successful bidder shall confirm the negotiations within the stipulated time.

ii. Bidder will have to attend concerned office of IndianOil for negotiations as required in respect of their quotation without any commitment from IndianOil. Clarifications with respect to tender shall be obtained from IndianOil as per contact details indicated in the bid.

3.0 SPECIAL CONDITIONS OF CONTRACT – TECHNICAL

3.1 Introduction:

3.1.1 Indian Oil Corporation Limited, a Company incorporated under the Companies Act,1956, having its registered office at Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra (E), Mumbai ("IndianOil") intends to invite bid document for **Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud Platform for Marketing Division for 5 years as** per the Bill of Materials, Bill of Quantities and Scope of Work given in this tender document.

3.1.2 Corporation may place repeat order in future in full or part thereof (within the price validity period i.e., 6 months from the date of opening of the price bid) to the successful bidder.

3.1.3 This document is meant for the exclusive purpose of bidding as per the terms, conditions and specifications indicated herein and shall not be transferred, reproduced or otherwise used for purposes other than for which it is specifically issued.

3.1.4 All costs of preparing the response to this RFP will be borne by the bidder only.

3.2 Objective of the Project:

IndianOil, a diversified, integrated energy major with presence in almost all the streams of oil, gas, petrochemicals and alternative energy sources; a world of high-caliber people, state-of-the-art technologies and cutting-edge R&D; a world of best practices, quality-consciousness and transparency; and a world where energy in all its forms is tapped most responsibly and delivered to the consumers most affordably. IndianOil retains the top spot as India's highest ranked PSU in Fortune 'Global 500' listing for 2021.

As the commercial enterprise with the largest customer interface in India, IndianOil reaches precious petroleum fuels to every nook and corner of the country through its network of over 32500+ fuel stations (petrol pumps), including over 8,515 Kisan Seva Kendra (KSK) outlets in rural markets, all of them fully automated for quality & quantity assurance.

For the convenience of large-volume consumers like the defence services, railways, state transport undertakings, industrial, agricultural, and marine sectors, IndianOil has about 7,000 dedicated fuel pumps in operation at their doorstep to ensure timely delivery of products and efficient maintenance of inventory.

The 32500 + Fuel Pumps and approximately 4000+ Consumer Pumps which are automated are connected to the central system called IRAS/ICPAS which is designed and developed by IndianOil using in-house expertise and hosted in its data center at Mumbai. The platform currently serves these automated outlets and handles the current peak hour load of approximately 2.5 million transactions per hour and is built to run 24x7 – 365 days. (Future requirement of system are mentioned in Section "Scalability and Performance Requirements"

Indian Oil Corporation Limited (IOCL) would like to revamp the Central Integrated Data platform which interacts with the automated Retail Fuel stations across the country and Consumer Fuel Pump Automation Data platform architected on the Public Cloud infrastructure platform components. IOCL is looking to benefit from the serverless platform,

Function as Service, Platform as Service, Cloud Managed Databases and Data warehouse in the Cloud platform which can scale up and scale down based on the requirement. We are also envisaging reduction in the overall cost of running the platform on Cloud vis-à-vis running the same platform on-premises. The platform should sustain/adapts continuously to the challenging business needs/requirements of the business.

IndianOil is looking for vendors (called SI) who have inhouse expertise to design, develop, and maintain these kinds of platforms on cloud for this requirement. This is a bespoke development for the requirement of the IndianOil. Post development, SI will be running the platform for 5 years. IndianOil IT team will actively engage in process of building the solution in Cloud with active involvement in the development or further modification/changes required in the platform, but the partner should have the overall responsibility to build and run the solution and engage with the CSP (Cloud Service Provider) (for billing and SLA) for the entire contract duration.

The solution requires that the endpoint with the systems which interact with the central platform should not be changed. It should stick to the exact requirement. E.g., SOAP based web service requirement for interacting with the FCC at Fuel outlets and sending data to Kafka system to external "Vishleshan" system and other integration point.

IOCL aims to modernize these applications by leveraging latest advances and best of breed technologies that can address the current and future technical and functional requirements. Below sections provide architecture and functionality of current applications. Bidder should re-architect and re-implement the application using micro-services architecture and serverless/fully managed cloud native technologies.

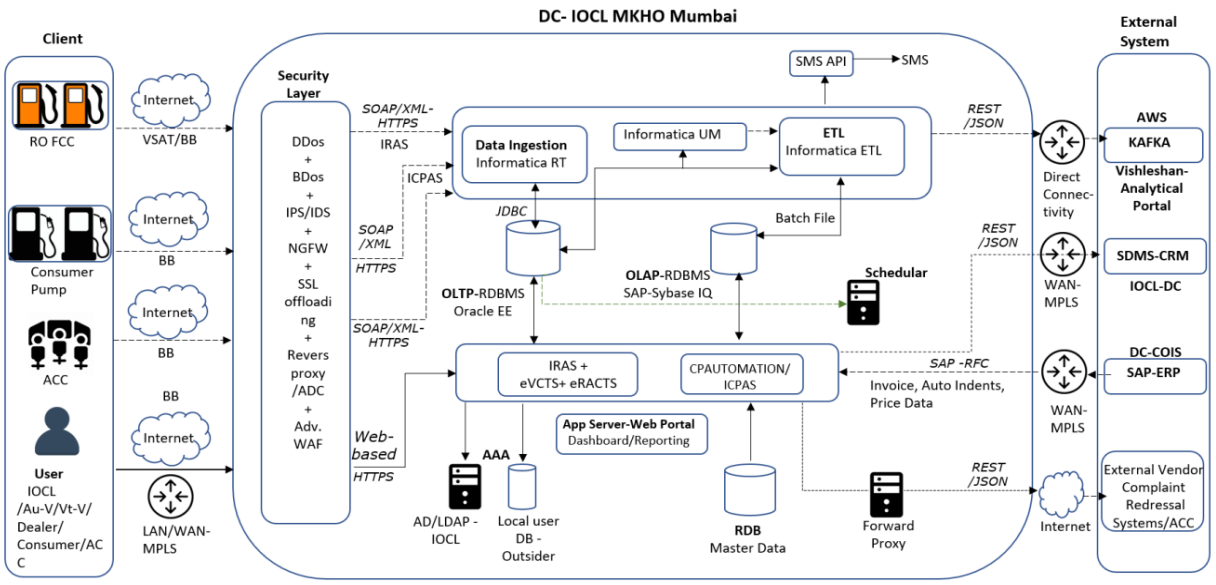
Bidder should re-implement **"Current System Components"** (section below) considering requirements mentioned in section **"New Solution Requirements"** (section below)

The details including the technical architecture are proprietary to IndianOil and without written permission/consent from IndianOil concerned official the same cannot be shared.

3.3 Current IRAS and ICPAS Architecture

Current IRAS and ICPAS applications are deployed on-premises. Different ROs (retail outlets), CPs (Consumer pumps) access the APIs to both push and pull the data from IRAS and ICPAS respectively. ROs and CPs report transactions, tank related observations, nozzle related observations and other details through APIs in real times. IOCL users access the portal to look at the recent data coming through the APIs.

IRAS/ICPAS current architecture is reflected in below diagram.



Current APIs are SOAP based and on receipt of data at API level, different workflows are executed for different APIs.

Workflow details are mentioned in separate detailed functional document. Workflows involve authenticating the API, verification of few data fields from database, validating the inputs of APIs, insertion of data into databases, passing the data to integrated third party external systems.

External systems are not part of the scope, but integration using existing protocols with the external system and data exchange is part of the current scope.

3.3.1 Detail Functional Description:

Bidder shall refer functional document for detail functional understanding of the current solution. Since the Functional Document is confidential in nature, as it covers detailed workflow, API Specification, etc., an NDA with the participating vendor is essentially to be signed before disclosing the attachment (Functional Document). Bidder shall submit NDA in the format available on IOCL e-tender portal. Functional Document shall be available to the bidder post acceptance of submitted NDA by IOCL.

3.3.2 Current System Components

S.No.	Technology	Platform	Architecture
1.	Database	RDBMS – Proprietary/Linux	2 node HA
2.	Database	RDBMS – Columnar – Proprietary/Linux	3 node HA architecture
3.	App Server	JEE 8 – Open Source/Linux	2 Servers in HA

4.	App Server	JEE 8 – Open Source/Linux	2 Servers
5.	Batch Jobs	Proprietary – Windows	Single Server
6.	ETL – Web Service	Proprietary/Linux	3 nodes
7.	Message Queue	-do-	3 nodes
8.	ETL – Sch. Jobs	-do-	Single Node
9.	LB/ADC & Reverse Proxy	Appliance based	HA
10.	DDoS	Appliance based	HA
11.	IPS/IDS	Appliance based	HA
12.	NGFW	Appliance based	HA
13.	WAF	Appliance based	HA
14.	Forward proxy	Appliance based	HA
15.	Global DNS/GLSB	Appliance based	HA
16.	VPN	Appliance based	HA

3.4 New Solution Requirements:

1. Designing, architecting, blueprinting, development, implementing the IRAS/ICPAS application using micro-services architecture, serverless/fully managed cloud native technologies.

2. Pushing the data to external systems and making such data available for other systems to pull.

3. Integration of proposed cloud-based solution with on-premises AD server, ERP system, master database of retail, notification services etc.

4. Bidder shall host complete solution in Data Centre(s) of one CSP during the entire tenure of the contract. Same would be applicable in case Solution is migrated to any other CSP.

5. Bidder shall be responsible for designing, monitoring, provisioning, and management of required cloud infrastructure including third party applications.

6. Bidder shall have back-to-back support and agreement with the CSP during the entire tenure of the contract. Bidder shall also have back-to-back support from respective OEMs for any 3rd party solution like API Management, Security etc. during the entire tenure of the contract

7. The entire solution devised by Bidder/CSP needs to be approved by IOC's technical committee. Bidder shall submit reports on a regular basis related to issues, incident, SLA, components uptime, resource utilization to IOCL.

8. Cloud based Solution for IRAS/ICPAS shall need to comply 100% with SOAP interfaces and data transfer requirements of existing system.

9. Bidder shall ensure that all the components of the solution be on latest version. Any change required in the solution so as to meet the mentioned requirement should be factored in the support cost and IOCL will not pay any additional charges for carrying out such upgrade, patching of the solution or its underlying components.

10. **As part of bid submission, bidder shall submit detail technical proposal including the proposed architecture, detailed solutioning, CSP/OEM components/services and detail project plan including the development methodology, resource deploy plan and their resume.**

11. Successful bidder shall sign and submit Master Service Agreement (MSA) attached as a separate annexure in bid document. Terms and condition mentioned in MSA shall be applicable to this RFP.

12. For rate discovery the successful bidder shall also submit detailed cloud service bouquet along with cloud rate in the attached format as **Annexure-A** (Rate shall be submitted only by successful bidder post award of contract). Rate quoted by successful bidder shall be used by IOCL for placing repeat order or any additional order.

13. Due to any change request, if any cloud service is used for which rate is not discovered then for such services, rate shall be less than or equal to the public quoted/available rate.

14. SI shall configure and maintain below environments.
    1) DEV Environment
    2) Test Environment
    3) Pre-Prod / Staging Environment
    4) Production Environment (HA requirement as per requirement mentioned below)

15. **Definition of a Transaction (IRAS/ICPAS):**
    a. Invocation of an API (exposed towards FCC/CP) and its associated data lookup, authorization, authentication, transformation and persisting in the databases or storage systems to make it available for further reporting. The associated application portals with master management, transactions, operational & analytical reporting is also considered part of the transaction. Other subsystems which derive data and further process is also to be included in the scope of transaction. The data being pushed or being made available to pull to these external systems (like Vishleshan (IRAS), SDMS-CRM, ERP, Retail Applications, etc.) are also considered to be scoped part of the transaction (with the mentioned frequency of data being pulled/pushed).
    b. Only successful transaction will be considered in calculation of transaction. Payment will be released on number of such successful transaction as mentioned in BoQ.
    c. The transactions will be measured on the API call from the FCC (Retail Outlet system) and CP (Consumer Pump System) which are successful (Successful call was made by the remote system and response was communicated by cloud application back to FCC/CP). The platform should also be able to track, monitor and alert the request originator endpoints and also need to generate the number of unsuccessful request / failed request from both FCC & CP as well as general request on the API endpoint.
    d. Successful transactions are as data received on the API exposed, processed & persisted in the data storage systems. The scope also considers pushing the data to external systems and making such data available for other systems to pull.
    e. The bidder should scope for all the cloud infrastructures including the security, network, running portal, reporting dashboard, user access and pulling / pushing data to IOCL ERP

systems and other sub systems as defined in the scope document and mapped it with the transaction.

3.4.1 Solution Design Principles:

1. While designing the application on cloud, the bidder to ensure that the applications built with stateless components. If there is a need to have a stateful component for storing of session details, then the state should be stored in a NoSQL/SQL/In-Memory-Cache database available on the cloud platform. In case cache is used then cache should be automatically refreshed. There should not be any manual/on-demand intervention should be required to trigger cache refresh.
2. Bidder shall develop a scalable system which can handle increasing numbers of requests without adversely affecting the response time and throughput of the system. To the extent possible for Web and App, scale out or scale horizontal architecture should be utilized, where, depending upon the increase of load another instance should be spawned at run-time.
3. The proposed application to be re-architected using the Serverless architecture. Serverless computing refers to a new model of cloud native computing, enabled by architectures that do not require server management to build and run applications.
4. The proposed application to be re-architected using the Micro services architecture. Micro services architecture is an architecture style that structures an application as a collection of loosely coupled services that enables continuous delivery/deployment of large complex application. Solution architecture should be designed to reduce interdependencies so that failure in one component of the system should not affect other components and each component should be independently deployable in case of change without deploying the entire application. The proposed solution should leverage the Microservices architecture adhering to following requirements:
    a. Use of technology agnostic services for the communication between various components.
    b. IP addresses should not be hardcoded.
    c. Wherever it is deemed fit use of asynchronous integration services available on the cloud should be utilized.
    d. The component failure should be handled in a graceful way.
    e. The solutions/components should provide API based access as per business need. This functionality will allow system to be integrated with other systems in future.

    The bidder should ensure that for application and infrastructure release deployment, **DevSecOps** framework should be utilized. Tools for Continuous Integration of changes, Continuous Deployment, Automated testing of the deployed changes, Developer productivity tooling, Container Image repository, Image Vulnerability scanning, Kubernetes Policy Management, Configuration management, Environmental drift management, code dependency repository, code versioning, and ensure downtime within acceptable error budgets. Tools used for these purposes should have Enterprise / CSP/SI Support. In case of usage of opensource tools like Jenkins etc the bidder should ensure that the tool so used is not obsolete and the SI should have internal team/practice to configure, run and support the tool.
5. The solution should be architected to run on cloud services offered from multiple facilities i.e., separate physical sites (DC/availability zones). Different facilities mean discrete Data Centres running in physically separated buildings, each with redundant power, networking, and connectivity. This kind of IT landscape should provide Production applications/workloads and associated IT components with high availability and fault tolerant features with provision for scalability.
6. Solution should provide business continuity in case of any disruptions using one of the Data Centre facilities / High availability Zones. In case of any failure, active-active architecture under High-Availability zone should ensure constant availability of services with no data loss and customer data traffic should be moved away from the affected area in auto mode.

7. The application should leverage synchronous replication across Data Centres / High availability Zones to avoid data loss due to a site failure. Proper backup mechanism to be implemented to ensure not more than 5 minutes of data loss even in case of accidental deletion of data.
8. **Layered Architecture -** Layered Architecture to provide flexibility for change and high performance with minimal disruption. Dependency on sub systems to be minimum by using modular components. Architecture should be future proof to provide flexibility of changing / replacing subcomponent services.
9. **Data Governance** - Ensure high quality data on the platform through cataloguing, identification & cleansing. Metadata management service for cataloguing data assets providing a flexible and powerful cataloguing system for capturing both technical metadata (automatically) as well as business metadata (tags) in a structured format. Empower the Data Scientist to find or tag data and enforce data security policies and maintain compliance that help ensure the right people gain access to the right data and sensitive data is protected.
10. **Cloud Portability:** The solution should be easily portable from one cloud services provider to any other leading provider if required; hence, the bidder shall use cloud services based on open standards.

    Bidder shall avoid technologies that limit mobility. The movement of data to another cloud system should not be complex and expensive and should facilitate such operations on scale. Proprietary - data formats, API, and service should be used only when it is absolutely necessary in the solution and should be mentioned in the solution document.
    Bidder also shall not use any proprietary cloud service which prohibit data portability to any other leading CSP. The necessary tools for extracting bulk data to be available in the respective Cloud / OEM itself. The proposed solution should support migration (multi-Cloud portability) with minimum or no customization as per IOCL choice.
11. **Data localization:** All data of the solution shall be hosted on Data Centres within the sovereignty of India and should be governed by Clause of Master Service Agreement (attached as separate annexure in bid documents).
12. **Security and Compliance Principles** - Below set of guiding principles should be considered for designing, building, running, and monitoring secure workloads on the cloud:
    a. Identity and Access Management (IAM): the IOCL system of record must be the root trust for authentication, authorization, least privilege and privileged access management.
    b. Infrastructure and network security: All possible environments (Dev/Quality/Pre-Prod/Prod) and zones (DMZ, shared, and private) should be segmented from one another either logically or physically.
    c. Endpoint/server protection: Endpoints/servers/VMs should be protected and monitored against network layer attacks, exploits, and unintended access.
    d. Application security: Integrity of applications must be monitored and controlled to ensure applications are not vulnerable and protected from threats.
    e. Privacy and data security: Data must be encrypted while at rest and in transit. Data should be handled in accordance with appropriate and applicable laws of the country.
    f. Security monitoring and control: The security, risk and compliance of the cloud platform must be monitored for potential anomalies and threats with events reported to IOCL security operation Centre.
    g. Governance: Changes to infrastructure and applications must be performed via Infrastructure as code (IaC) in a controlled and auditable manner.
13. Infrastructure shall be deployed with Serverless Computing/Fully Managed Services, where infrastructure management tasks like capacity provisioning and patching shall be handled by cloud services natively.

14. Product/ platform Container images used for building the solutions should come from a CSP / OEM vetted marketplace and support should be available on the products/ platform from the SI or the official source of Image.

    Container Build Guidelines

    While building container images of the solution the SI need to ensure that the base image is properly patched and free from known vulnerabilities. The base image used should be an image certified by CSP/OEM or provided by them (through a valid repository). Such images are to be kept in the solution private repository with proper tagging. At least the images which are actively used in various landscapes including production and 2 versions prior to it (of production such as n, n-1 & n-2) should be preserved.
15. Serverless services shall have automatic scaling and built-in high availability, all without managing any servers. Pricing shall be based on the actual amount of resources consumed by an application. Services shall allow configurable threshold/baseline against which scaling up and scaling down should be done. Threshold for auto-scaling shall be done in concurrence with IOCL.
16. **High Availability Requirement:**

    All the solution components should be configured in high availability to avoid any single point of failure. Design and deployment should consider following points:

    a. System should leverage Active-Active architecture on two physically separated sites (in different buildings) / Redundant Availability zones and Serverless technologies / Fully Managed Services.

    b. Incase of non-availability of distant physical separated data center for high availability then Bidder shall configure active -active (HA) architecture in fault tolerance zone and shall also configure solution for Disaster recovery with Data center residing more than 100 KM apart and meeting following condition:

        i. Solution shall provide RPO of 30 mins and RTO of 6 Hrs. with DR.
        ii. Bidder shall conduct minimum two(2) DR Drills in a year whenever requested by IOCL without any additional cost to IOCL.
        iii. Data Center running DR shall be compliant with following valid certifications:
            1. ISO 9001
            2. ISO/IEC 27001
            3. ISO/IEC 27017
            4. ISO/IEC 27018
            5. ISO/IEC 27701
        iv. CSP and bidder shall certify that all type of data shall remain and reside within geographical boundaries of India.
17. All the design principle shall comply and adhere with the prevailing MEITY standards and guidelines for cloud adoption.
18. Bidder shall also submit following declaration as part of the bid:

S.No.	Point	Supporting document to be submitted

1	Bidder shall declare all software/platform components including CSPs and other OEMs component and shall submit MAF for 3rd party Software OEMs wherever applicable to participate in this tender.	Declaration of all software/platform components including CSPs and MAF for 3rd party Software OEMs wherever applicable.
2	Bidder shall certify that all type of data shall remain and reside within geographical boundaries of India.	Declaration from SI
3	Bidder to ensure that solution including data is hosted on the MeitY empaneled CSP and STQC audited Data Centers throughout the contract.	Bidder/SI shall submit declaration letter mentioning that solution will be hosted on the MeitY empaneled CSP and STQC audited Data Centers throughout the contract.

3.4.2 Technical Eligibility Criteria for Cloud Service Provider (CSP):

Bidders shall provision and deploy proposed solution in the cloud meeting following eligibility criteria and shall submit required document mentioned against each point.

S.No.	Point	Supporting document to be submitted
1.	CSP shall certify that all type of data shall remain and reside within geographical boundaries of India.	Declaration from CSP
2.	CSP should have accreditations relevant to security, availability, confidentiality, processing integrity, and/or privacy Trust Services principles. SOC 1, SOC 2, SOC 3.	Report and letter mentioning the compliance.
3.	Proposed Cloud Service Provider (CSP) should be STQC audited and MeitY empanelled and offer all services from India only as per guideline of MeitY.	Valid MeitY empanelled Certificate for the CSP.
4.	Proposed CSP's Data Centers should be compliant at a minimum with the following: o ISO 9001 o ISO/IEC 27001 o ISO/IEC 27017 o ISO/IEC 27018 o ISO/IEC 27701 o PCI DSS Level 1	Letter from CSP with relevant Certificates.
5.	The CSP should be capable of providing IaaS (Infrastructure as a Service), SaaS (Software as a Service) and PaaS (Platform as a Service). Shall offer Serverless platform and provide marketplace for Independent Software Vendors (ISV).	Declaration from CSP
6.	Proposed CSP shall have training and certification available for their cloud.	Declaration from CSP and publicly available training and certification portal with pre-defined learning advancement path.

7.	The CSP should provide financially backed SLAs for all the cloud services offered.	Declaration from CSP

3.4.3 Scalability and Performance Requirements

Details of APIs and their current data in and out is mentioned in Functional Document. However, future system expects below performance and scalability requirements. Cost calculation should be done based on below requirements.

A. IRAS Scalability and Performance:

Parameter	Value	Description/notes	Remark
Total number of ROs	32,500	Number of retail stations	Growth to be considered: 1st year - 25% y-o-y growth 2nd to 5th year – 15% y-o-y growth.
Total Number of APIs	54	Details of APIs are mentioned in functional document	60 Nos. of API to be considered for current scope of work
The system should be scalable to a total number of API calls per month	8 billion per month		
The system should be designed to scale to a sustainable Peak Transactions per second.	16,000	Serverless technologies used should be able to scale seamlessly to peak workload.	
Response time per API call (Time will be measured with SSL enabled on APIs; data encryption enabled various storage services for data at rest)	Less than 150ms	Even at the peak load the response time should not cross this threshold.	Bidder shall deploy necessary tool to continuously monitor response time.
Maximum # of 4xx and 5xx errors at peak load	1%		
Recency of data visibility on portal after data ingestion	1 second		
Recency of data considered in report	2 mins		
Max time taken to generate reports	2 mins		
Avg. size of the payload of xml (Excluding SSL and	2KB	Mentioned size excludes size of TCP/SSL handshake, SSL, header data.	It is implied that only transactional data shall be stored from the XML

header)			payload.

B. ICPAS Scalability and Performance

Parameter	Value	Description/notes	Remark
Total number of CPs	4000	Total number of consumer pumps	Growth to be considered: 1st year - 10% y-o-y growth 2nd to 5th year – 3% y-o-y growth
Total Number of APIs	52	Details of APIs are mentioned in separate functional document	
The system should be scalable to a Total number of API calls per month	500 million per month		
The system should be designed to scale to a sustainable Peak Transactions per second.	4000	Serverless technologies used should be able to scale seamlessly to this peak	
Response time per API call (Time will be measured with SSL enabled on APIs; data encryption enabled various storage services for data at rest)	Less than 150ms	Even at the peak load the response time should not cross this threshold	Bidder shall deploy necessary tool to continuously monitor response time.
Recency of data on portal	1 second		
Recency of data in report	2 mins		
Max time taken to generate reports	2 mins		

3.4.4 Detailed Technical Specification and Requirement:

Bidder shall provision and deploy all mentioned cloud component/services meeting following specifications:

A. Networking and Connectivity

1. The CSP should provide a scalable and highly available DNS service.
2. DNS Services supporting creation of A, AAAA, SOA, PTR record shall be provided and managed by the bidder.
3. TLS/SSL certificate for the domain shall be provided by the bidder.
4. Domain Name for hosting the application and API will be procured and provided by IOCL.
5. Set of static public IP address shall be provisioned by the bidder and shall be reserved for IOCL account during the entire contract period.
6. APIs on cloud should be accessible to ROs on internet and high latency VSAT network.
7. There should not be errors in API responses when network bandwidth at API client site is low.
8. All the communication between IOCL and CSP should be encrypted.
9. Bidder shall ensure ease of deployment and configuration of workload across any zones of a region for high availability.

10. The entire solution platform should be hosted out of a VPC (Virtual Private Cloud) which would ensure logical isolation of the infrastructure. System shall have capability to configure route tables that define which subnets/VPCs are allowed to route external traffic over site-site connections, Internet connections, or even specific virtual machine instances.
11. Instances in VPC shall be communicate with services outside the VPC, but they shall not receive unsolicited connection requests.
12. Communication with other VPCs, or on-premises networks shall be through proper access control.
13. The CSP should support multiple (primary and additional) network interfaces per instance/ compute.
14. The CSP should support capturing information about the IP traffic going to and from network interfaces.
15. The CSP should support multiple IP protocols, including TCP, UDP, and ICMP protocols.
16. The CSP should IP address ranges specified in RFC 1918 as well as publicly routable CIDR blocks.
17. The CSP should support IP addresses associated with a customer account, not a particular instance. The IP address should remain associated with the account until released explicitly.
18. The CSP should allow creation of a default network and subnet with instances launching into a default subnet receiving a public IP address and a private IP address. The cloud service should also provide capability to create custom virtual networks / secure zones allowing workload / VM isolation.
19. The CSP should support subnet level filtering – Network ACLs / Security Groups that act as a firewall for associated subnets, controlling both inbound and outbound traffic at the subnet level.
20. The CSP should support adding or removing rules applicable to inbound traffic (ingress) to instances.
21. The CSP should support adding or removing rules applicable to outbound traffic (egress) originating from instances.
22. The CSP should support connecting two virtual networks to route traffic between them using private IP addresses.
23. The CSP should offer content delivery network service to speed up distribution of static and dynamic web content. CSPs should have content delivery network edge locations in India.

24. NAT (Network Address Translation):

a) The CSP should support NAT instances that can route traffic from internal-only instances to the Internet.
b) NAT solution shall be deployed to allow instances in private subnets to create outbound connections to the internet.
c) NAT shall allow both IP address translation (IPv4) and port address translation.
d) NAT Solution shall have feature of Source NAT.

25. Load Balancer:

a) The CSP should support both local and global Load balancing.
b) CSP should provide a native load balancer supporting HTTPS/HTTP, TCP and UDP load balancing. It should support load balancing functionalities like URI based routing, TLS/SSL offload, health checks for backends etc.
c) The CSP should support Load balancing of instances across multiple host servers. Load balancer should be capable of SSL decryption (offloading). Load Balancers should also support Internet Protocol version 6 (IPv6).
d) Solution shall deploy load balancer for API Gateway, web/app portal to achieve high availability of the component.
e) Application Load Balancer shall be deployed for layer7 request (supporting HTTPS/HTTP) and shall be able to route traffic to targets based on the content of the request.

f) Application Load Balancer provides shall provide advance request routing targeted at delivery of modern application architectures, including microservices and container-based applications.
g) Application load balancer shall have close integration or functionality of WAF to protect web applications/APIs from common web exploits to ensure maximum and avoid any security compromise, or any excessive resources utilization.
h) ALB shall have option to inject custom http header like x-forwarder-for, x-forwarder-proto, etc.
i) ALB shall support sticky session/persistence based on cookies.

26. Integration with On-Premises Data Centre:

a) The CSP should support Site-to-Site IPSec VPN connection between the cloud provider and IOCL data centre/DR.
b) An encrypted link shall be established using Site-to-Site IPSEC VPN for establishing secure connection between IOCL's on-premises Data Centre and CSP.
c) This VPN connection will be used to access IOCL's VPC from on-premises Data Centre and to access On-Premises hosted services (Like AD, SAP ERP) from offered cloud.
d) VPN Connection shall be established to Three (3) no. of IOCL DC viz COIS Gurugram, Marketing Head Office Mumbai and DC Bengaluru. Each VPN connection shall include two VPN tunnels from two different set of public IP and can be used simultaneously for high availability. CSP should manage their network with multiple ISPs. At any point of time redundant VPN tunnels should be maintained.
e) Network Link Encryption (IPSEC) to be done with strong standards of encryption e.g., AES-256.
f) Bidder shall ensure that minimum 100 Mbps bandwidth shall be available for use over IPsec Tunnel, and it shall support traffic shaping and bandwidth management.

27. AD Integration:

a) On-premises AD server shall be used for AD/LADP authentication of IOCL users. The authentication mechanism can be implemented through "AD Federated Services", "AD connect" (Pass through/Password hash sync) or any other suitable mechanism for IOCL users having AD Account.
b) Bidder shall host current Local DB based non-IOCL users in user management service (Identity Management Service) in cloud and/or IOCL provided SSO
c) Role-based access shall be available based on the user profile and role.
d) Communication with On-premises AD server shall be on encrypted channel and LDAPS (LDAP over SSL) shall be used for authentication mechanism.
e) AD Integration services shall be hosted in CSP which will communicate with on-premises AD Server over encrypted channel.

B. Data Governance and Security

1. Solution shall be based on **Zero Trust Model security architecture** which means that by default, not everyone is trusted from inside or outside the network, and verification is mandatory for everyone trying to access the resources on the network. This additional layer of security has been introduced to prevent data breaches
2. Micro-segmentation for workloads thereby having a capability to monitor and restrict East-West communication based on the need.
3. Solution shall have macro and micro level segmentations to provide defence-in-depth secured architecture.
4. The Data Governance and Security Framework being put by the bidder should ensure that the granularity of the data access should be maintained.

5. Configuration and management access shall be available to admin users using IAM.
6. Scaling of the Security Resources of the project shall be automatic. Security component shall be able to scale as per the application/API usage. Resources of the security products like CPU, Memory, Throughput, Latency etc shall not be a bottleneck for the whole project during the runtime.
7. IOCL Data shall not leave the boundaries of the country and data residing within Cloud shall not be accessed by any entity outside the control of IOCL/authorized representative of IOCL.
8. The solution should be able to discover all provisioned resources of the Cloud Service Provider (CSP) and provide details such as configuration items inventory, history of changes to such configuration items, snapshot of resource inventory at a single point in past, set-up of policies to track provision of resources within a client defined rulesets and auto-notifications (based on notification severity level) each time, whenever a configuration change happens and it should be configurable by administrator.
9. Security shall be built in automated software build pipelines with continuous integration and continuous delivery (CI/CD) and agile development methodologies.
10. It is recommended that the SI should follow the eSAFE (e-Governance Security Assurance Framework) Guidelines for Implementation of Security Controls issued by the Ministry of Electronics and Information Technology (MeitY), Government of India.
11. CERT-In guidelines, GOI (Govt of India) guidelines on application security shall be followed.
12. Any financial cyber legal obligation arising due to any non-compliance / breach on any account non attributable to IOCL would have to be borne by the bidder.
13. The Authentication Framework should support multifactor authentication and single sign-on. The access to the application will be governed by the bidder's own authentication & authorization models and shall ensure that only personnel authorized by IOCL will be provided with appropriate access to the application as defined by IOCL. Single Sign-on in this context refers to the bidder's system permitting access to various modules within the bidder's system without requiring individual logins. It should also support authentication mechanism like tokenisation, OAuth 2.0, Device Identification and authentication, Adaptive authentication.
14. Unauthorized access should be restricted and only authorized users with valid authentication shall be allowed to access.
15. The Solution should have the capability to log every possible detail of user actions, data access and changes. The system should store last 6 months of such log beyond which the same would be archived in retrievable format. The logs present in the system should conform to the Indian IT Act and should uphold legal sanctity under Indian Laws.
16. The bidder shall be responsible for ensuring security of the solution from any threats and vulnerabilities. The bidder shall address ongoing needs of security management including, but not limited to, monitoring of various devices / tools such as firewall, intrusion prevention/ detection, content filtering and blocking, virus protection, event logging & correlation and vulnerability protection through implementation of proper patches and rules.
17. Bidder shall ensure proper end point protection for any VM based Solution.
18. The Solution should have audit and compliance features which enables IOCL to monitor the provisioned resources, performance, resource utilization, and security compliance.
19. Solution shall have capabilities to continuously monitor for malicious or unauthorized behaviour. Bidder shall deploy manpower for continuous monitoring of logs, attacks, malicious or unauthorized behaviour.
20. Policies and procedures shall be established with supporting business processes and technical measures implemented for the secure disposal and complete removal of data from all storage media, ensuring data is not recoverable by any computer forensic means.
21. Solution shall apply security measures like 'captcha' at the time of login by user in web portals to determine whether the user is human or not, and to avoid unauthorized access by Other Software i.e., Bots etc.
22. The IRAS/ICPAS Solution must have integrated security/ monitoring features with the following:

- Definition of roles and users
- Define role-wise add/ edit/ view/ delete rights for each entry form/ report in all modules
- Digital time and user stamping of each transaction
- Online monitoring of the user activities using user activity logs

23. Network/Transport Security:

a) Solution shall have capability to segregate public subnet/networks and private subnet/networks.
b) All calls to APIs shall be SSL/TLS encrypted.
c) The CSP should have a native service to provision, manage, and deploy Secure Sockets Layer/Transport Layer Security (SSL/TLS) certificates.
d) The native service should support both public and private certificates.
e) The native service should have capabilities to take care of certificate renewals.
f) Access to all the hosted application/portal/dashboard/reporting/API shall be SSL/TLS encrypted with support for strong cipher suite.
g) Encrypted HTTP session using SSL/TLS (HTTPS) with support for highest level encryption standard.
h) DNSSEC shall be configured for DNS Security to protect domain against DNS Spoofing and DNS hijacking.

24. DDoS protection and mitigation:

a) DDoS protection at network, transport, and application layers shall be provided.
b) The managed DDoS protection service should provide always-on detection and automatic inline mitigations that minimize application downtime and latency.
c) Solution shall offer protection against qualitative (behaviour based and anomaly based) and quantitative (volumetric) DDoS attack.
d) Solution shall detect and mitigate attacks at Layer 3 to Layer 7.
e) Solution shall provide historical dashboards or reports for at least 6 months.
f) The internet services of the CSP shall be clean with DDOS protection and active monitoring to be provided by the CSP.

25. Firewall Solution:

a) All inbound and outbound traffic between Internet and VPC shall be routed to Firewall solution.
b) Firewall solution shall perform stateful inspection of traffic from layer-3 to layer-7.
c) Firewall solution shall provide complete control and visibility to Layer 3-7 network traffic for entire VPC.
d) Firewall solution shall support both stateless and stateful rules.
e) Firewall solution shall be capable of decrypting and then encrypting SSL traffic.
f) Firewall solution shall have capability of threat prevention against threats like exploits, vulnerabilities, Intrusion (IPS), worms, virus, spywares, known malwares etc.
g) Solution shall allow creation of policy/rule based on source IP/port, destination IP/port, application, domain, protocol, and geo-location.
h) Firewall solution shall support integration with DevOps tools, Configuration management tools and Provisioning tools like Terraform, Chef, Ansible etc for deployment.
i) Firewall solution should integrate with Native cloud services for automatic scaling to increase performance and availability.
j) Firewall solution shall offer web filtering that can stop traffic to known-bad URLs and monitor fully qualified domain names.
k) Solution should provide historical dashboards or reports for at least 6 months.

l) Firewall's intrusion prevention system (IPS) shall provide active traffic flow inspection to identify and block vulnerability exploits using signature-based detection.
m) IPS solution shall be able to detect and prevent unauthorized activities/ sessions based on IPS signatures.
n) All signature like IPS, Malware, Virus, Worms etc. shall get regular updates of content.

26. Micro-segmentation

Solution shall have capability to restrict East-West communication between different workloads based on IP address, port, tags/label, and service group.

27. Managed Threat Detection Service:

a) Continuously monitor for malicious or unauthorized behaviour to help protect account and workloads. The service should also detect potentially compromised instances or reconnaissance by attackers.
b) Threat detection service should be able to generate actionable alerts.
c) Threat detection service should support integration with event management and workflow systems.

28. Application Security and API Security:

Web application firewall (WAF)

a) Solution shall be to protect application from vulnerabilities specified in OWASP publications.
b) Solution shall support monitoring and blocking any malicious HTTP/S traffic traveling to the application.
c) WAF shall inspect and monitor application and APIs and shall protect it from web exploits.
d) The WAF shall be able to protect the web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources.
e) The WAF should be able to give us control over which traffic to allow or block the web application by defining customizable web security rules.
f) The WAF should be able to deploy new rules immediately.
g) The WAF should support API based operations to automate the creation, deployment, and maintenance of web security rules.
h) WAF shall have the capability of work in learning mode.
i) Solution must provide atleast (but not limited to) the following Features and Protections against various attacks:
    1) Open Web Application Security Project (OWASP) Top 10 attacks
    2) OWASP Top 10 API security
    3) Parameters Tampering
    4) Cookie Poisoning
    5) SQL Injection
    6) Session Hijacking
    7) Web Page Parameter Security
    8) forceful Browsing
    9) Protection based on the IP Reputation
    10) Debug Options
    11) Backdoor
    12) Buffer Overflow Attacks
    13) Data Encoding
    14) Cross-Site Scripting (XSS)
    15) Brute Force Attacks
    16) OS Command Injection
    17) Cross Site Request Forgery (CSRF)

18) Information Leakage
19) Path (directory) Traversal
20) Predefined resource location
21) Behavioural based detection and protection
22) Web application layer customized protection
23) Whitelisting based protection
24) API (Application Programming Interfaces) protection
25) Support for JSON and XML format in API security.
26) Sensitive data exposure protection for example, passwords, credit card etc.
27) Unauthorized navigation
28) Anti-site scraping
29) HTTP/OCSP protocol validation
30) Cookie signing validation

29. Data Security

a) The solution shall provide Key generation, storage, management, and auditing solution for encrypting data within applications or controlling the encryption of data across Cloud services.
b) The fully managed key management solution should be able to control encryption across a wide range of cloud services and applications.
c) The fully managed key management solution should be FIPS 140-2 compliant.
d) The fully managed key management solution should be able to provide the logs of all key usage to help meet our regulatory and compliance.
e) The CSP should have a native, fully managed service to centrally manage secrets needed to access the applications, services, and IT resources.
f) fully managed secret management service should be able to control access to secrets using fine-grained permissions.
g) The solution shall have capability of Provision, manage, and deploy public and private SSL/TLS certificates.
h) The solution shall have capability to Rotate, manage, and retrieve secrets e.g. database credentials, API keys, and other secrets throughout their lifecycle. Users and applications shall retrieve secrets with a call to Secrets Manager APIs, eliminating the need to hardcode sensitive information in plain text.
i) Data shall be Secured and encrypted on storage of data/data elements in Database and DB backup. Also, Data warehouse shall allow access management to access specific resources (e.g., table, views, columns). Data Warehouse shall provide column level security.
j) Data should be encrypted while in flight.
k) All data at rest in database or data warehouse or any other storage shall be by default encrypted with AES-256.
l) Comprehensive admin activity logging and audit trail of sessions and transactions shall be available.
m) All the communication between API client and API component at cloud should be encrypted with AES-256 or other encryption schemes supported by retail FCC client applications.

30. Identity and Access Management

a) The solution shall securely manage access to services and resources in the Cloud. Assign specific roles to access different Cloud services.
b) The solution shall Identify the resources in customer accounts, such as Storage objects or IAM roles, that are shared with an external entity (can be another account, a root user, an IAM user or role, a federated user, cloud service, an anonymous user) to identify unintended access to your resources and data, which is a security risk.
c) Shall support Identity management for web portal. Add user sign-up, sign-in, and access control to the web portal.

d) It shall provide Central governance and management across accounts to enforce policies, detect violations
e) It shall have the capability of users to be authenticated using the IAM solution hosted in Cloud with a capability to be integrated with IOCL authoritative Identity system and a federated AD or from any other OAUTH & SAML based SSO system.
f) User authorization i.e., role-based access to services, transactions, and data shall be available.
g) It shall provide Secure storage of user credentials
h) Root access of the cloud account shall be with IOCL only.
i) Best practices as suggested by CSP/OEM shall be followed for access management.
j) The system must have proper security and maintenance facility with Role Based Access Control (RBAC) features for controlling the access rights over the system and over the various functions/ features available for different types of users.
k) Principle of least privilege shall be adopted to grant only the required set of permissions needed to perform the job.
l) System Control and Audit:

1) The system should maintain audit trails, audit logs and transaction logs (what, when, who has changed).
2) The application shall log all the actions done by individual users with username, date and time and the IOCL administrator shall be able to generate detailed audit logs and history of the process instance.
3) It should enable availability of user wise online audit trails/ logs which should be archived based on user, date, time etc. as part of audit records keeping.
4) All the edited and deleted (if any) records should be traceable and copy of all records should be kept in the system and which should be available with MIS reporting of the same.

C. Platform Requirements

1. Serverless Compute:

a) CSP should offer serverless compute service that eliminates the need to choose VM instances and scale cluster capacity.
b) Serverless compute service should ensure workload isolation and should not share Operating System Kernel with other customers.
c) Serverless compute service should ensure consistent performance at any scale.
d) Serverless compute service should allow running the compute in separate network or virtual private cloud.
e) Serverless compute should allow authentication of container images from any private registry.
f) Serverless compute should perform container level health checks and provide the metrics in the monitoring service
g) Serverless compute service should allow encryption of storage at rest.
h) Serverless compute service should allow heterogenous cluster (single cluster with both server and serverless nodes).
i) Serverless function service should support function versioning.
j) Serverless function service should provide support for stateful functions.
k) Serverless function service should provide support for multiple programming language including .Net, Java, Go, Python, Node.js
l) While building Serverless functions, the SI should choose a language such as Java, Python, .NET, Node and Go, that is commonly available across multiple FaaS platforms from different CSP's.
m) Serverless function service should be able to work with load balancers.

n) Serverless function service should provide support for central code that is shared across multiple functions.
o) Serverless function service should allow running minimum 200 functions concurrency.
p) Serverless function should support packaging and deploying functions as container images
q) Serverless function should support coordinating multiple functions for complex or long-running tasks by building workflows.

2. For IaaS components the OS should be supported Linux based and patching should be available through the CSP or through marketplace OEMs.

3. API Solution (API Management system/ API Gateway):

a) Bidder shall deploy an API solution which will act as a reverse proxy to accept all application programming interface (API) calls, aggregate the various services required to fulfil them, and return the appropriate result.
b) API Solution should support current SOAP based APIs.
c) API Solution should also be extensible for creation of new REST and HTTP APIs.
d) Solution design should allow SOAP, REST and HTTPAPI to coexist.
e) API Solution should allow both data push and data pull type APIs.
f) API Solution shall have authentication service and rate limiting.
g) API Solution shall be single entry point for all clients and external endpoints.
h) API Solution shall accept request and response in SOAP/XML format which is currently configured in all FCC.
i) API Solution shall also accept request and response in REST/JSON format to integrate with external endpoints.
j) API Solution shall support protocol translation to convert SOAP based webservice to REST based webservice.
k) API Solution shall have rich analytics and monitoring tools and integration with billing system.
l) API Solution shall be fully managed service to create, publish, maintain, monitor, and secure APIs at any scale.
m) API Solution shall have JSON and XML schema validation to validate the data and parameter type.
n) API Solution shall handle all the tasks involved in accepting and processing of concurrent API calls, including traffic management, CORS support, authorization, and access control, throttling, monitoring, and API version management.
o) API solution should Support microservices, Ingress controller and service mesh.
p) API solution should support many protocols including TCP, HTTP(S), WebSocket and GraphQL.
q) API solution should be DevOps friendly with API.
r) API solution should have Out-of-the-box Vitals monitoring and dashboard.
s) API solution should Support integration with external tools like Prometheus and Grafana, ELK stack, Splunk etc.
t) API solution should have RBAC support for management.
u) API solution should provide End-to-end mutual TLS security.
v) API solution should provide Auto-generated API documentation based on Swagger/OpenAPI specification files.
w) API Gateway shall have JSON and XML schema validation to validate the data and parameter type.
x) API solution to allow hybrid architecture for multi-cloud strategy.
y) Platform to provide a single console for managing complete API lifecycle (Develop, Deploy, Monitor, and Analyse.)
z) Solution shall ensure APIs are always available, secure and performing as expected.
aa) Solution shall define and monitor the APIs for SLOs (success rates/latencies) and notify if there is any miss.

bb) Solution shall enforce Advanced API Ops like Anomaly detection with zero/minimal operational efforts.
cc) Solution shall have features to enable end to end API debugging and remediation procedures.
dd) Solution shall have Operational and Business visibility with out of the box dashboards with no additional infra or components.
ee) API Solution should allow mapping of APIs to domain names.
ff) All traffic to APIs should be SSL/TLS encrypted. (Should support based on the IOCL requirement)
gg) All traffic to APIs should pass through "Internet Security Component/Security Solution" and only legitimate traffic should be passed to API component.
hh) API Solution should log all the transactions. Logging dashboard should show metrics of successful and failed API calls.
ii) API Solution should authenticate the APIs before passing the data to backend component.
jj) API Gateway should have very small footprint and should meet the low latency expectation of IOCL applications.
kk) APIs should be accessible from internet and IOCL-VSAT (high-latency) network.
ll) API Solution should be able to trigger the workflow in API backend.
mm) Solution should scale automatically and should support peak load requirements mentioned in Section "Scalability and Performance Requirements".
nn) WSDL definitions for current SOAP based APIs is provided in functional document. Bidder should also publish the WSDL for APIs.

4. API Backend and Workflows:

a) API backend should manage the workflow for all the APIs.
b) API Backend should be implemented to support data validation, processing, integration with external systems and few other actions of workflows for each API.
c) Design of the solution can leverage running multiple tasks of workflows in parallel.
d) Backend should be fast enough to receive, validate, process and store the data to meet performance requirement mentioned in Section "Scalability and Performance Requirements". The performance should not degrade even when there is peak load (minimum 16000 TPS) and when there are large number of data records in the database (in billions).
e) API backend component should store the data in data store for faster retrieval.
f) API backend component should be designed for connecting and fetching data and permissions from systems at IOCL Systems office e.g., ERP, MDM, Active Directory etc.
g) API backend component should allow creating few backend jobs to fetch master data from RDB system / SDMS CRM (RDB system manages master data), cache data from various external systems.
h) All Container, microservice workload should be orchestrated using a fully managed /CSP PaaS Kubernetes orchestration engine.

5. Data Ingestion and ETL:

a) Ingestion systems should support capturing data from Relational databases over JDBC/ODBC, APIs, Messaging systems like Kafka and should be flexible to support new data source types that may be onboarded from time to time post initial project completion.
b) Solution must support data ingestion in both batch and real-time mode with minimal code changes. It's preferable to have a single ingestion system to support both real-time and batch ingestion capabilities.
c) Bidders must prepare for upload of all historical data initially and incremental thereafter.
d) Data integrity must be ensured during ingestions.

e) Data ingestion pipeline should be template driven, parameterised and easily configurable to onboard new data sources
f) Ingestion systems should be able to scale without any downtime to accommodate large data volumes.
g) Ingestion systems should provide a graphical view of the current state of ingestion pipeline, failures, success, errors.
h) Data pipeline design should support real time data validation and real time ETL during data ingestion to Data Warehouse.
i) ETL Platform should be serverless/fully managed and be able to automatically scale up and down as needed without manual intervention.
j) The data processing platform should have the capability to ingest data in both batch as well as real-time mode.
k) ETL platform should be able to support scheduling of jobs internally as well as provide support for workflow orchestration using fully managed Apache Airflow or other open-source options supported by the CSP.
l) The data processing platform should be able to extract data from various source entities like files/Databases/Data Streams/APIs (REST/SOAP). It should also be able to transform the data in memory without intermediary dumping of data. The platform should have the capability to load the data to various target entities like files/Databases/Data Streams.
m) ETL platform should support development with Python/Java/Scala.
n) ETL Platform should support exactly once processing for streaming data.
o) ETL Platform should support late arriving data while processing data streams.
p) Should allow for restricting traffic to private IP addresses only and within the VPC boundaries.
q) Cloud Platform should support monitoring each job/step in both streaming and batch pipeline. It should allow setting alerts for various conditions that might occur during the execution.
r) The solution must identify different data integrity issues and measure the severity of these data quality issues.
s) The solution must provide the capability to perform data profiling, data flow design, data mapping routines and debugging.
t) The Solution should support Integrated Metadata Management, Data Quality, Data Preparation, Governance and Security functionality
u) System should provide GUI/Console to build the end-to-end workflow in pipeline or notebook including connections, transformations, feature engineering, model/algorithm and monitoring.
v) The platform should provide bulk loading capabilities for all industry leading databases.
w) The platform should have support for all data to be stored in encrypted format.
x) The platform should provide file reader and writer for file system or Object Store.
y) The platform should provide integrated workflow scheduling, automatic load balancing.
z) The platform should support storing of the entire code base developed on a separate repository and should support versioning of the repository and objects.
aa) The platform should be rich in the set of in-built transformations and functions to facilitate effortless data transformations if required.
bb) The platform should provide the ability to create User Written Code transformations, which allows leveraging custom code as part of the process flow.
cc) The platform should have the ability for Command-line job deployment options for deploying single and multiple jobs.
dd) Solution shall have the capability of integrating different Data Sources like files/Databases/Data Streams/APIs (REST/SOAP) and write into different types of targets (Object Store/Data Warehouse/APIs).
ee) Solution shall have the capability of rollback if a batch mode or a realtime ETL job fails. It shall have the capability of identifying the last committed job and restart from the next pending job in case of a failure and restart
ff) Solution shall have the capability of modularizing and reusability of different ETL jobs.

gg) Solution shall have the capability of running all generic database functions like lookup, sorting, joining, aggregating, sequencing, filtering etc.
hh) It should have the capability to do a status check of other job and take a decision based on the status of that job.
ii) It should be able to generate notifications like email etc based on a job status or a set of job status.

6. Database Services:

a) Should offer serverless/fully managed database service/DBaaS to manage transactional data (insert, update, delete operations)
b) The service should manage the underlying infrastructure management, scaling, patching etc. Any patching or upgrade should not impact the application availability.
c) Database services offer mechanisms to support higher degrees of availability and durability for the data.
d) Database service should support geo-redundant storage for replication of data at separate physical data center to improve data redundancy.
e) Database services offer encryption of data 'at-rest'
f) Database services offer encryption of data 'in-transit'
g) Database service should be able to support scalability and performance parameters as mentioned in "Scalability and Performance Requirements" section.
h) Platform should be able to offer managed relational database service in the cloud for PostgreSQL
i) Database service should support synchronous replication and automatic failover of a primary database to a standby database copy in a separate physical datacentre to improve data redundancy.
j) Database service should support read replicas that make it easy to elastically scale out beyond the capacity constraints of a single DB Instance for read-heavy database workloads.
k) Cloud provider should offer a fast and flexible NoSQL database service for applications that need consistent, low latency at any scale.
l) Database service should support secondary indexes. Secondary indexes are indexes that contain hash or hash-and-range keys that can be different from the keys in the table on which the index is based.
m) Database service should support streams. Stream is an ordered flow of information about changes to items.
n) Database service should support the creation of on-demand (i.e., user-initiated) point-in-time copies (snapshots) and the restoration of a database instance using one of these copies.
o) Database service should support strong consistency for read operations to make sure users are always reading the latest values.
p) Database service should support integration with a data warehouse for advanced business intelligence capabilities.
q) Bidder shall store data pertaining to different Software Modules like CAMC, eRACTS, eVCTS etc. in RDBMS for a period of 18 months. Data older than 18 months can be archived for the entire contract period of 5 Years. If required, data from archival should be retrievable within 12 Hours.

7. Transactional Data Store, Data Warehouse and Data Platform:

a) Data arriving at the API level should be stored in a transactional data store.
b) The transactional data store should leverage serverless/fully managed data store and should be scalable enough to handle peak load as mentioned in "Section Scalability and Performance Requirements".
c) Transactional data store should maintain synchronous copies of the data across sites / availability zones to protect against site / zone failures.

d) Bidder shall store data in transactional Data store for minimum of 7 Days provided the data is consumed and updated in other sub-systems. Bidder shall ensure that data is not flushed out of transactional Data Store till the data is consumed and updated in other sub-systems. After that transactional data can be moved to object storage for a period of 3 months where data can be retrieved immediately.
e) Complete transactional data granularity shall be maintained in the Data Warehouse. Data from transactional data store can be purged after ingesting into Data Warehouse or after successful delivery to all third-party systems required or after 7 days, whichever is later.
f) Bidder should consider cloud native fully managed Data Warehouse system. Infrastructure management should be inherent feature of cloud-based Data Warehouse.
g) Managed data warehouse service to work on petabyte scale of data.
h) Proposed data warehouse platform should support native columnar architecture.
i) Data warehouse Platform should support native data compression.
j) Data warehouse platform should be scalable and support automatic resize capability.
k) The platform should have an audit trail for all user activity and log security events. There should be mechanism to store and retrieve such audit logs for atleast a period of last 6 months.
l) Proposed data platform should be a OLAP database supporting massively parallel processing capabilities.
m) Simultaneous loading and querying of data should be possible without performance degradation.
n) The data warehouse Platform should support full, incremental, incremental since last full backup strategies.
o) Data warehouse component should support data storage in the form of schemas, tables, and views.
p) For optimized storage, data should be compressed and stored in columnar format.
q) Data warehouse should support stored procedures / user defined functions.
r) Data should be ingested in Data Warehouse tables in near real time.
s) For complex report generation, data warehouse should support complex SQL queries.
t) Data warehouse should support parallel processing of data on multiple nodes for faster execution of queries. Queries response should be fast enough to support the most complex report generation in less than 2 mins.
u) Data warehouse should support aggregation and join of data from multiple tables.
v) For Database and Data Warehouse, compute and storage should be independently scalable. So as to scale only the required component.
w) Transactional store and Data warehouse maintain redundancy of storage across different locations ensure data durability.
x) Reports should be accessible from Portal and parameters of the reports should be configured from Portal.
y) Report generation query (most complex) should not take more than 2 mins and recency of data in reports should be less than 2 mins.
z) Bidder shall store data pertaining to different Software Modules like CAMC, eRACTS, eVCTS etc. in RDBMS for a period of 18 months. Data older than 18 months can be archived for the entire contract period of 5 Years. If required, data from archival should be retrievable within 12 Hours.
aa) Bidder shall store data in Data Warehouse for a period of 27 months. Bidder shall ensure that data is queryable from Data Warehouse for a period of 27 months. Bidder can opt for Archival or choose to retain the data in the Datawarehouse for data older than 27 months. Archived data shall be kept for entire contract period. If required, data from archive should be retrievable within 12 Hours.
bb) Proposed Datawarehouse system should provide detailed insights about queries to help decide changes/optimizations to be made in data warehouse to improve performance and reduce the cost.
cc) Proposed Data Warehouse system data should be used for machine learning model training.

dd) Proposed Data Warehouse system should be able to leverage machine learning system in report generation. Few newer reports might require machine learning based output to be utilized in reports.
ee) Proposed datastore platform should support OLAP based data models as well as modern highly denormalized wide schemas for reporting.
ff) Proposed Data Warehouse platform should be serverless / Fully Managed and should have native feature that allows scale up and scale down as required. Also, it should allow automatic addition of resources to handle extra load of queries.
gg) The Platform should support automatic snapshots and data redundancy to avoid any data loss.
hh) Platform should support massively parallel and distributed data processing
ii) Simultaneous loading and querying of data should be possible without performance degradation
jj) The Data Warehouse system should not breach availability SLA (99.9%) even during the maintenance.
kk) Datastore platform should support data partitioning and other query optimization (e.g., clustering/sort keys/distribution keys) techniques to ensure good performance.
ll) Data platform should support data encryption both at data at rest and motion in default mode.
mm) Data Warehouse should support both structured and semi-structured datasets like nested JSONs and be able to query/analyse using ANSI SQL.
nn) The Data Platform should have columnar storage format to support efficient data retrieval and performance of queries.
oo) The platform should provide an easy-to-use interface to manage (create, update, delete) users, assign privileges to users at granular level, manage (create, update, delete) groups/roles etc.
pp) The platform must support a Role Based Access Control to manage user access to the data. The platform should restrict access to data based on the user and the group/roles the user is assigned to.
qq) There should be provision to restrict access at a granular level for databases, views schemas.
rr) Data Warehouse should support building machine learning models using SQL from data warehouse itself. It should have native integration cloud AI/ML services.
ss) Solution should support redacting sensitive PII information like email, credit cards etc.
tt) Proposed Data warehouse/Data platform should expose a searchable catalog of schema and attributes for easy search at attribute level if needed.
uu) Proposed Data warehouse platform should have the ability to query data from transactional databases and Object storages without moving it to a data warehouse.
vv) Proposed Data warehousing platform should support open-source frameworks like Apache Spark to read/write data without making additional copies of data.
ww) Proposed data warehouse should support simultaneous loading and querying of data without performance degradation.
xx) Proposed Data warehouse platform should be able to automatically and continuously optimize tables by re-clustering/repartitioning/re-distributing/re-sorting as data grows. No manual intervention should be needed.
yy) Proposed Cloud platform should support automatic schema detection.
zz) Proposed Warehouse platform should support at least 100 concurrent queries and be able to scale to even higher concurrency if needed.
aaa) Proposed Data warehouse storage should not require manual tuning and statistics gathering to remain performant and it should automatically continue to optimize itself as more data keeps getting added.
bbb) Proposed Data platform should provide inbuilt support for GIS data querying.
ccc) Proposed Data Warehouse system should not breach availability SLA (99.9%) even during the maintenance.
ddd) Warehouse platform should provide column level security to restrict individual fields based on roles.

eee) Proposed Data platform/solution should have ability to restrict access to data within the VPC should be provided to prevent access outside of the defined network boundaries

8. **Pub-Sub / Streaming Ingestion Service**
   a) Solution/Data platform should offer a serverless/fully managed streaming data ingestion service.
   b) Streaming ingestion service should allow multiple applications to read from the service
   c) Streaming ingestion service should support heavy volume ingestion and transmission as required by IOCL application (refer section "Scalability and Performance Requirements".
   d) Streaming ingestion service should be able to auto scale based on the volume of data being received.
   e) Streaming ingestion service should allow delivery to multiple storage targets.
   f) Streaming ingestion service should allow delivery to HTTP endpoints.
   g) Streaming ingestion service should allow delivery to a log destination.
   h) Streaming ingestion service should allow delivery to data warehouse.
   i) Streaming ingestion service should store data redundantly in multiple different locations.

D. Backup/Snapshot, Archival and Retention Requirements

Data Backup and restoration should be test at scheduled interval to ensure its availability for Business continuity/Disaster recovery scenario.

	Backup	Back-Up Retention	Data Accessibility For Reports
Database	Daily Backup OR Point in time snapshot	7 days	• Bidder shall store data in transactional Data store for minimum of 7 Days provided the data is consumed and updated in other sub-systems. Bidder shall ensure that data is not flushed out of transactional Data Store till the data is consumed and updated in other sub-systems. After that transactional data can be moved to object storage for a period of 3 months where data can be retrieved immediately. • Complete transactional data granularity shall be maintained in the Data Warehouse. Data from transactional data store can be purged after ingesting into DataWarehouse or after successful delivery to all third-party systems required or after 7 days, whichever is later.
Data Warehouse	Daily Backup or Point in Time Snapshot	7 days	Last 27 Months – to be used in data warehouse reports Post 27 Months – Bidder can opt for Archival or choose to retain the data in the Datawarehouse. Data older than 27 months can be archived for the entire contract period of 5 Years. If required, data from archive should be retrievable

			within 12 Hours.
Application Configurations	Daily Backup	15 days	NA
Git Code / other source Repositories on Serverless Compute	Daily Backup	15 days	NA
Logs	Daily Backup	15 days (For access Logs - 12 months)	

E. IRAS and ICPAS Portal and Reporting Dashboard

1. Bidder shall design, develop IRAS and ICPAS Portals as per the functional requirement providing access for reports, modules, sub-modules, dashboards, etc.
2. Portal will be accessed by IOCL users, Non-IOCL Users (RO Dealer, Automation Vendor, Consumer Pump, External Vendor) based on their access permissions.
3. Portal shall support following total user count:

User	Total	Concurrency
IOCL Internal Users	3000	1500
Retail Outlet Users	50000	2000
External Vendor	500	50
Consumer Pump Users	5000	500

4. The solution should have a built-in authentication mechanism (SSO) with principles of least privilege and role-based authorisations with a provision for authenticating users from Active Directory available at IOCL when IOCL allows Cloud federated AD to connect to on-premises AD.
5. The solution shall allow authenticating users using cloud identity management service and/or IOCL provided SSO.
6. Solution shall support Multi-Factor Authentication for users connecting to the portal over internet.
7. Bidder should use serverless/fully managed technologies to implement the portal. There should not be any need of server management. System should be scalable.
8. Portals should provide menu items to access data from transactional store and reports from analytics sub-system.
9. Portal should provide role-based access mechanism.
10. Portal should provide admin interface for creation of new roles and managing permissions of the roles.
11. Portal should provide admin interface for users to be added to roles.
12. Portal web page response time should be in sub-second.
13. The solution platform should have the capability to visually represent data either static or dynamic in nature.

14. The solution platform for data visualization should have the capability to cache data in memory and cache reports in memory and render the same on UI.
15. The solution platform should support historical data analysis as per requirements and be able show past data as at that point in time.
16. The solution platform should have the capability to define the audience for various analytical reports. Also, it should have a framework to control the access of data in a report apart from accessing a particular report.
17. The bidder shall leverage SMTP service to cater to various email requirements from the solution standpoint.
18. This data visualization platform should be available in all the form factors of display be it Mobile/Tablets/Laptops/Desktops (through app or browser). Etc.
19. The solution should support the same dashboard and reports created on Web to be accessed from mobile devices with iOS and Android as needed and any work needed for mobile friendliness should be done by bidder.
20. The platform should be able to render reports in all the major browsers like Edge/Chrome/Firefox/Safari.
21. The bidder has to ensure that the solution should be able to scale without performance degradation.
22. The Visualization layer should allow embedding and access from enterprise portals within IOCL using SSO with AD.
23. Platform should support sending business alerts via email/SMS if needed.
24. Platform should be scalable and preferably serverless/no-ops.
25. The solution platform should have the capability to visually represent data either static or dynamic in nature.
26. The solution platform for data visualization should have the capability to cache data in memory.
27. The solution platform should support historical data analysis as per requirements.
28. The solution platform should have the capability to define the audience for various analytical reports. Also, it should have a framework to control the access of data in a report apart from accessing a particular report.

F. Third Party integration System:

1. Solution should be able to integrate with third party external systems.
2. System should support both pull and push based third party integration
3. Data can be pushed to these systems in the form of streaming pub-sub and API calls. (Few systems support pub-sub, and few supports API calls)
4. Solution design should ensure guaranteed delivery of the messages to multiple systems.
5. Design should consider unavailability of one or more of these systems.
6. In the event of unavailability of the external systems, the data should be available in integration system.
7. Integration system should check the availability at period level and should resume the data transfer where it was left off and should be designed to integrate and transfer data as per the external system availability.
8. Data might need to be converted to particular format accepted by external system.
9. Solution might need to fetch and cache subset of third-party master data in the solution for use of API workflows.
10. **Data Integration Endpoint: (Major Integration point are listed here, Please refer functional document for detail)**

A) Vishleshan (Analytical Portal Hosted in AWS)

Bidder shall be responsible for ensuring cloud-to-cloud connectivity for connecting to Vishleshan hosted in AWS.

Parameter	Value	Description/notes
No. of Data Integration (Being Provider of the service)	3	Indicative Sizing
No. of Data Integration (Being Consumer of the service)	21	Indicative Sizing
Method	Rest API	

B) SDMS-CRM (Master Data for Retail)

Parameter	Value	Description/notes
No. of Data Integration (Being Provider of the service)	10	
No. of Data Integration (Being Consumer of the service)	10	
Method	SOAP API	

C) External Vendor Complaint Redressal System:

Parameter	Value	Description/notes
No. of Data Integration (Being Provider/Consumer of the service)	25	
Method	Rest /SOAP API	

D) On-premises SAP-ERP System

Parameter	Value	Description/notes
Method	RFC /SOAP	Currently RFC is being used, which will be migrated to SOAP based. Bidder to consider SOAP.

E) On-premises RDB (Master Data for Retail)

Parameter	Value	Description/notes
Method	Pull/Scheduled	Currently master data is maintained in RDB and is under migration to SDMS-CRM.

G. Notification System

1. Cloud provider should offer a fast, reliable, scalable, fully managed message queuing service.
2. Cloud provider should offer a fast, flexible, fully managed push notification service that lets users send individual messages or to fan-out messages to large numbers of recipients.
3. Cloud provider should offer a cost-effective outbound-only email-sending service.
4. Solution should be able to send Email, SMS, and Mobile push notifications.
5. For SMS, existing SMS gateway of IOCL may be used.
6. The bidder shall provision SMTP server to cater to various email requirements from the solution standpoint.

H. Cloud Monitoring and Management Services:

1. The CSP should offer a service to create & provision a collection of related cloud resources in an orderly and predictable fashion using a template.
2. The CSP should offer pay-as-you-go pricing (on an hourly basis or lesser) where IOCL will pay for services by the hour with no long- term commitments.
3. The CSP should offer monitoring dashboard depicting the availability and performance of cloud resources / services.
4. The CSP should offer Audit Trail feature for account activities to enable security analysis, resource change tracking, and compliance auditing.
5. The CSP should offer recommendations around resource configurations and security.
6. Analyses the Cloud environment and provides best practice recommendations (or checks) in five categories: cost optimization, security, fault tolerance, performance, and service limits.
7. Solution shall be designed to give full Visibility regarding performance, availability, and capacity with real time dashboard.
8. Solution shall give visibility on application w.r.t no. of unique users visited, Nos. of unique users connected, concurrent/total session, throughput, concurrent/total connection, etc. on real time basis and on historical basis.
9. **Application Performance Monitoring**
   a) Solution shall have application performance monitoring system.
   b) Shall collect detailed performance information on response time for incoming requests, database queries, calls to caches, external HTTP requests, and more.
   c) Shall automatically collect unhandled errors and exceptions.
   d) APM shall be able to integrate with the provided PaaS services like Database, NoSQL, Datawarehouse, DevOps etc.
   e) APM shall have following functionalities/ features:
      i. Should have end-to-end tracing and with view traces and logs in context with automatic trace id injection, distributed traces to infrastructure metrics, network calls, and live processes, synthetic API and browser test failures to backend errors
      ii. Should based on no sampling, retain errors and high latency traces automatically, custom metrics from all ingested spans to track trends and kpis
      iii. Should have code-level visibility with root cause analysis, break down slow requests by time spent in code on CPU, GC, lock contention, and I/O, enhance application performance monitoring with regression detection after code deploys
      iv. Should be able to track deployment, monitor and compare impacts of canary, blue-green, and shadow deploys on application performance, error and latency outliers with out-of-the-box service dashboards, visualize service dependency changes due to deploys using the Service Map
      v. Should have auto-instrumentation
      vi. Should have integrations with third-party frameworks or libraries for visibility into Java, Node.js, Ruby, Python, Go
      vii. Should have flexible support for vendor-neutral standards such as open telemetry and open tracing.
      viii. Should be able to provide same monitoring functionality for containerized applications orchestrated using Kubernetes platform
      ix. Should provide feature to create custom reports & dashboards
      x. Should have highly granular role-based access control, and a super admin should be able to control access of users at a granular level.

   Should support modern / cloud-based configuration management and provisioning tools.

10. **Database Monitoring**
    a) Bidders should ensure regular health checks, monitoring and alerting about data storage / utilization of storage, failure handling of storage.

b) Bidders to ensure monitoring of the inbound data flow for completeness, consistency, and accuracy.
c) The Solution should monitor for all DB attacks like SQL injection and generate alerts for the same.

11. Infrastructure Monitoring

a) The monitoring solution should be provided as a managed service. Some select features (for e.g., fault, performance, configuration, security, and accountability) of the solution are mentioned below:
b) Shall provide regular reports of monitored devices and their monitoring metrics.
c) Shall detect, isolate, and notify faults encountered in cloud environment.
d) Shall provide utilization reports including but not limited to CPU, memory, disk space etc.
e) Shall track metrics that can go up and down.
f) Shall allow to query, visualize, alert on metrics no matter where they are stored.

12. Log Management

a) Solution must have capability to pull logs for monitoring. Raw data flows into solution from a variety of sources, including logs, system metrics, and web applications
b) Solution should have a central/hub for collection, storage and indexing of logs
c) All actions taken and operations performed should be logged for auditing, event tracing, and debugging purposes.
d) All generated logs should be forwarded to an aggregation solution, with analytics performed against normal behaviour so that anomalies can be detected, and alerts triggered.
e) The bidder should make provision to push the security devices log to the IOCL SIEM on-premises.
f) Logs for various transactions to be maintained for 12 months.

I. Testing Requirements

1. System will be tested for functionality, scalability, performance, and security parameters by generating load using various load testing tools.
2. Automation testing tools should be used, and test cases should be executed as soon as code is checked in. Before the release, test reports shall be submitted with IOCL.

3. Functional Testing:

a) To create testing configurations, API testing tools (SoapUI / Postman / other similar tools) will be configured to send the traffic to current system endpoints.
b) Same configurations will be used to send traffic to new system endpoints.
c) Response from API in steps 2 and 3 above will be matched to validate the system functionality.
d) In above API calls, workflow tasks, their outputs, impact in database and other system components will be verified. Data should be properly saved in the database and data warehouse systems. Workflow activities should be properly executed.

4. Scalability, Performance Testing:

a) Response time generated in Functional Testing above will be used to measure Performance.
b) Both at lower and peak load, recency of data in database and on portal will be verified.
c) Both at lower and peak load, report will be generated from portal. Report generation time and recency of data in report will be considered.

5. Security Testing:

a) Regularly both internal and external Vulnerability Assessment and Penetration Testing (VAPT) of system should be done.
b) Internal VAPT testing should be done before every release. Key parameters for VAPT and their results should be shared with IOCL after every release.
c) External VAPT testing/audit should be done twice a year. Key parameters for VAPT and their results should be shared with IOCL after every external testing.
d) Any finding/gaps after the assessment shall be fixed and resolved as soon as possible by the bidder.
e) Application security audit shall be carried out by CERT-In empaneled vendors before the site is made operational or after any major change and vulnerabilities should be mitigated.
f) PT (Penetration Testing) shall be carried out by CERT-In empaneled vendors before the site is made operational or after any change in source code and vulnerabilities should be mitigated.

J. Machine Learning System

1. The Cloud provider should support comprehensive AI and ML Capabilities.
2. Platform to provide support for serverless ML components to reduce administrative efforts.
3. Platform should support no-code options for building custom models along with providing full capabilities for building custom models using open-source frameworks like Tensorflow and Pytorch.
4. Platform should support exporting trained models for edge deployments.
5. Platform should provide rich set of pre-trained and ready to use APIs for Vision, Video, Audio (Speech to text and Text to Speech), Natural Language Processing.
6. Platform should provide direct support for building ML models within the Datawarehouse using analyst friendly SQL Language.
7. Speech APIs should offer extensive support for multiple Indian languages.
8. Easy to use MLOps capabilities should be provided with support for Model versioning, training, evaluation, re-training, model monitoring for drift and skew, along with tools for the Data scientists and citizens to understand and explain model predictions.
9. Platform should provide support for time series analysis, anomaly detection, visual inspection and many other use cases which IOCL may come up with in future.

K. Tool and Solution Management

1. **DevOps and Automation Requirements:**
   a) Provide tools to facilitate continuous deployment to across the landscape comprising of Development, UAT and Production environments through a web-based platform.
   b) The CSP should offer a service to deploy and manage applications in the cloud by allowing code repository, automating code deployment, capacity provisioning, load balancing, auto-scaling and application health monitoring.
   c) Continuous Delivery tools should be able to integrate with Change Management/ ITSM tools.
   d) Should provide version management at object level.
   e) Should provide comparison between two versions at object level.
   f) Should facilitate rollback to any of the previous version at object level.
   g) Solution deployment should be automated using release pipelines for fast and reliable application and infrastructure updates.
   h) Automation pipeline should automatically compile source code, runs tests, and produces software packages that are ready to deploy.
   i) Automation pipeline should cater to automation for serverless software deployments also.
   j) Automation pipeline should avoid downtime during application deployment and should handle the complexity of updating the applications.

k) Solution should have cloud-based Git compliant version control system. Automation pipeline should automate build, test and pre-prod deployment as soon as code is checked in(workflow based). The CI/CD pipeline should allow individual component build, test and deploy independently apart from the full system build.
l) Bug Tracking should also be used to report, log and track all bugs. Access to bug tracking tools should also be provided to IOCL team.
m) Tools based DevOps to be followed for the entire Software (bespoke) development. Modern CI/CD pipeline tools (suitable for Cloud) to be used including the Git based Source version control and private repository for software builds.
n) The landscape blueprinting should be ensured using configuration management tools including the setting up and configuration of network and security layers.
o) Automated testing should be used for testing and should ensure the metrics are captured and demonstrated during the entire product development and maintenance life cycle.
p) Provide a highly scalable, managed source control service that eliminates the need for Developers to operate your own source control system.
q) Support "rolling deployments" so that a defined number of instances are available as configuration changes are made so that some instances are running to serve requests as other instances are being updated.
r) Support Blue-green Deployments through DNS switching. This allows developers to switch domain name services (DNS) to make application deployments so that a new environment that has passed all the necessary tests and is ready to go live, can have traffic redirected to it and become the de-factor production environment while the old live environment now becomes the test bed for future deployments and vice versa.
s) DevOps Solution must have a centralized log. The log shall maintain where apps were placed. This log must also be able to provide management and monitoring tasks to deployed application elements.
t) Allow the creation of scaling policies to act upon monitoring alarms that are triggered when defined thresholds are broken. Such a policy can result in an increase or decrease in the number of instances, depending upon the situation.

2. Configuration Management tools

a) Bidder shall provision tool to automate configuration management, automatic deployment, cloud provisioning and orchestrator via GitOps Model.
b) System shall have default sample repository /library for configuration.
c) System shall ensure consistency of configuration and policies for system in the infrastructure via GitOps.
d) System shall be able to integrate with software version control.
e) System shall support both push and pull configuration mode.
f) System shall be able to connect to client/node using SSH/SSL over secure channel.
g) System shall have GUI to support easy configuration by the administrator.
h) System shall give complete reporting of the proposed changes and implementation status.
i) System shall ensure proper management of configuration, approval and tracking.
j) System shall record, report and track changes and employ versioning as needed.
k) System shall automate system identification, patches, and updates.

3. Change management tool:

a) Bidder shall provision system to allow control, track, approve/reject the complete life cycle of the changes.
b) System shall allow creation of change request process based on incident, issue, ticket, upgrade, bug fix, etc.
c) System shall have option to allow/reject the changes by the administrator.
d) System shall have option to create workflow for the change management process and should be able to integrate with other systems using Webhooks.

e) System shall implement approve changes.
f) System shall be based on ITIL framework.
g) System shall allow to plan and schedule the changes.
h) System shall be able to categorize the type of change request like based on change type i.e standard type, normal change, emergency change. or based on risk of change like high risk, low risk.
i) System shall allow creation of template/workflow for approval of change.

4. ITSM & SLA Management Tool(s)

a) The bidder would have to provision an ITSM (IT Service Management) tool for the following purpose.
    - Incident and problem management
    - Change management and request fulfilment
    - Self-service provisioning and support desk
    - Automated workflows and DevOps integration
b) Bidder shall supply, install, and configure SLA management and monitoring tool for the Project. The SLA Management Tool will work under direct and exclusive control of IOCL. This SLA Management tool should have following features:
c) SLA management tool should be able to monitor all the service levels defined in the service level agreement.
d) The proposed solution should provide comprehensive and end-to-end management of all the components for each service.
e) The proposed SLA management tools should automatically document problems and interruptions for services and provide the consolidated violations as per the SLA.
f) The Tool should allow changing the parameters of the measurement and should allow adding new SLAs on need basis.
g) SLA management tool should enable the IOCL to have a unified view of the entire system SLA at single console.
h) The proposed solution should provide the following performance reports:
    i. Executive Summary report that gives an overall view of a group of elements, showing volume and other important metrics for the technology being viewed.
    ii. Capacity Planning report which provides a view of under-and-over-utilized elements.
    iii. Service Level report that shows the elements with the worst availability and worst response time-the two leading metrics used to monitor SLAs.
    iv. The proposed system must have a built-in report authoring tool which will enable complete customization flexibility of performance reports.

i) The tool should provide an integrated performance view for all the managed systems and networks along with the various threshold violations alarms in them. It should be possible to drill-down into the performance view to execute context specific reports.

5. Billing Management

a) Provide detailed dashboard of billing showing
    i. what Cloud services were used in what duration.
    ii. Forecasted billing based on current usage pattern should also be shown.
b) Bidder needs to ensure IOCL's cloud charges are based on actual consumption.
c) Bidder needs to ensure monitoring, managing, and administering the monetary terms of SLAs and other billing related aspects.
d) Solution should provide the relevant reports including real time as well as past data/information/reports for IOCL to validate the billing and SLA related penalties.

e) Bidder has to provide administrative right access to billing system software to for the transparency of billing management system.
f) Solution should provide
    i. Project specific billing dashboard with the option to drill down to individual component level
    ii. Custom billing dashboard using the Cloud billing data API and other billing elements should be made available to IOCL. The same to be developed based on the requirement provided by the IOCL team. Such dashboard should have IRAS and ICPAS separate cost bifurcation based on the transaction numbers.

3.5 Support and Services;

A. CSP/OEM Professional Services and Certifications

1. Should offer cloud services from CSP's MeitY Empanelled India Data Centre and must ensure that IOCL data resides only in India.

2. The bidder should provision OEM/CSP services that have significant market presence and is aligned with the future roadmap of concerned OEM/CSP. The CSP services must have clear future roadmap & shouldn't be declared End of Life or End of Sale or End of Support during the next 5 years period. In lieu of the above, IOCL requires the following from the OEM/CSP:
    a) Certification that the support for the cloud services will be provided for the minimum 5 years from the award of the work
    b) Provide the list of key clients and case studies of similar solution.

B. **CSP/OEM Professional Services scope of work**

1. The CSP/OEM Professional/Advisory team should assist the bidder and the IOCL team by providing inputs in the areas of architecture design, and security aspects implementation. The team will also provide review inputs for scalability and desired functional and technical requirements and also ensuring optimal utilization of cloud services and costs. The recommendations of the OEM/CSP would be binding to the bidder for compliance.

2. **Application Modernization with Serverless** - The CSP Professional services team will assist the bidder and the IOCL team in building the application architecture, building the development and deployment pipeline, review of application architecture as per the best practices and provide a high-level solution architecture, migration plan and success metrics for migration of data warehouse.

    Activities and Deliverables
    a) Assistance in building modernized application architecture based on microservices.
    b) Assistance in building development and deployment pipeline (CI/CD)
    c) Application Architecture Review as per modernization and serverless best practices.
    d) A high-level solution architecture, migration plan and success metrics for migration for data warehouse

3. **Cloud Security Assessment** - CSP Professional Services should assist IOCL and bidder by conducting a security assessment of cloud workloads. The assessment should comprehensively cover core security domains like Identity and Access Management, Infrastructure Security, Container Security, Data Protection, Visibility and Auditability Control and Incident Response capabilities. Based on the assessment the CSP Professional service should provide a maturity assessment report against cloud security best practices and identify target based, prioritized findings and recommendations from improving the security posture. Bidder to ensure that during the post deployment maintenance phase, at least one yearly review from the CSP

Professional Services should be done. The bidder will share findings and remediation measures undertaken with IOCL.

Activities and Deliverables

a) Detailed cloud security assessment to cover core security domains
b) Identification of target based prioritized findings and recommendations from improving the cloud security posture
c) Maturity assessment report against cloud security best practices

C. Annual Maintenance Contract (AMC)

1) AMC/ ATS will start post Go-live.
2) The SI shall ensure that any part/components of the solution if found defective, not performing as required during the contract period will rectify such issues at no cost to IOCL.
3) The SI shall ensure that all required upgrades were done on platform and other infrastructure components including OS etc., after appropriate testing during the entire warranty period. IOCL will not pay any additional costs separately for warranty, and the overall cost quoted by the SI shall include the same.
4) SI shall ensure stabilization of the solution post go-live.
5) The SI shall provide Annual Maintenance Support, post Go-live for the entire operations& maintenance period of five (5) years which shall include maintenance and technical support for the implemented IRAS/ICPAS Solution.
6) The SI shall be responsible for overall administration, operations, monitoring and maintenance of the deployed IRAS/ICPAS Solution and supporting platform/infrastructure at the cloud platform and to ensure the desired uptime.
7) The SI shall make available and implement all upgrades including definitions/ patches/updates/ service packs etc. proposed IRAS/ICPAS Solution and related software/ tools during the AMC period.
8) SI shall also be responsible for database administration, data back-up, data archiving, data security and other technical assistance.
9) Carry out preventive maintenance services at least once in a quarter(3months), if required.
10) Corrective maintenance services to be carried out as and when required.
11) If any CSP/OEM software/ tool/ platform is involved in the process, the SI shall arrange the support from CSP/OEM also for the same period.
12) SI shall transfer the ownership of the IRAS/ICPAS Solution and web portal along with the source code i.e., code of all bespoke modules or sub-modules developed/customized/configured/ procured. All the licenses and support related documents should be in the name of Indian Oil Corporation Limited.
13) In the event any of the key resource leaving the project/ employment with SI, the same shall immediately be replaced with another resource of equivalent minimum qualifications and experience. All such events should be notified prior to IOCL well with intime.
14) At no time, the provided manpower should be on leave or absent from the duty without prior permission from the designated nodal officer of IOCL. In case of long-term absence due to sickness, leave etc. The SI shall ensure replacements and manning of all manpower posts by without any additional liabilities to IOCL. Substitute will have to be provided by the SI against the staff proceeding on leave/ or remaining absent and should be of equal or higher qualifications/experience.
15) The bidder should also need to ensure the incoming resource should be trained in the IOCL project and complete knowledge transfer from the outgoing resource to be ensured. In case the new resource is not able to handle the assignment, bidder should change the resource as per the IOCL requirement.
16) The shadowing should be done at least for a month and IOCL team may assess the replacement resource capability to be part of the IOCL project.

17) Post completion of the 5 years of AMC period, IOCL in its own discretion, may extend the maintenance contract for, one year at a time.
18) During AMC phase, SI shall be responsible for (including following, but not limited to):

i. Technical Support

a) During this phase, SI shall deploy named technical resources for providing technical support for the entire contract period of 5 years for IOCL Project.
b) The SI is required to provide detailed profile of the team proposed for technical support during AMC phase, in technical bid.
c) The SI, if required, with prior permission from IOCL, may also deploy additional manpower for smooth functioning of the project at no extra cost.
d) Fixing bugs/ issues, functionality enhancements, patches to cater changes (including tax, legal, statutory and policy requirements), modification or enhancement to existing business processes, changes to configurations, customizations.
e) Help IOCL Operation Support team in redressing technical issues, monitor the performance of the system and keep the system up and running.
f) The technical support team in case required by IOCL may have to visit IOCL Mumbai office for any meeting/discussion and all such related expenses need to be borne by SI.

ii. Helpdesk Support:

a) Helpdesk support shall be offsite or on-site as mutually decided by IOCL and bidder. The bidder's team shall access Cloud platform over secure channel preferably using IPsec VPN Connectivity only for operations management.
b) The SI shall setup an IT helpdesk for IOCL for entire contract period of five (5) years post go-live of IRAS/ICPAS Solution on 24x7 – 365 days basis. This helpdesk will be responsible for resolving technical queries and incident logging. The Remote Support Center/NOC/Service Center must be ISO/IEC 27001, ISO/IEC 20000 & ISO 9001 certified. The Remote support center should have a well-established business continuity plan in place.
c) At least 2 Remote Support Center/NOC/Service Center should be available in different geographical locations within India for uninterrupted elevated support and details of the same has to be provided.
d) The support team should use an ITSM based tool for monitoring and managing the platform. 15 IOCL users to be provided access to the tool. There should be provision to integrate with the IOCL platform if required using API level integration.
e) In addition to helpdesk, bidder shall also set up an on-site/off-site IT support team including a project manager and team leads for different tracks to work closely with all the stakeholders. For successful operation support bidder to ensure that adequate manpower is deployed during support phase. The bidder has to ensure that the entire system and processes are monitored 24x7x365 and notifications and support for critical processes is maintained round-the-clock. The bidder would also extend all support required by any of the stakeholders/3rd Parties either to integrate with the solution or otherwise.
f) The helpdesk support team will be accessible to the IOCL Operation Support staff. If required, the helpdesk support team shall be present on-site for any support.
g) The helpdesk team shall be providing handholding support on new RO/CP on-boarding on to the platform.
h) The helpdesk shall also be understanding and resolving the internal user's queries/issues regarding use of IRAS/ICPAS Solution. If it can't be resolved, then communicate it to the helpdesk/create a ticket.
i) SI shall deploy a Helpdesk Management System (HMS) for IOCL for management of helpdesk calls and for SLA reporting and calculation purpose.

j) The SI shall submit the HMS generated call log report to the designated nodal officer on monthly basis and as and when required by the IOCL.
k) HMS shall allow users to create a ticket for any problem/ issue faced by them. If required, helpdesk team member shall create a ticket on behalf of someone else, and also close the ticket only by him/her after the resolution of the problem.
l) Communicate with technical team regarding the issue raise by the internal users /Business Operation Support team, and also update Business Operation Support team about the status of the open issues.
m) Helpdesk staff shall escalate the problem to the Project Manager and backend technical team and maintain the log/ status of the escalations.
n) SI shall take feedback from the user regarding quality of resolution provided, time taken in providing their solution, performance, and quality of HMS.

o) Resource – Technical and Helpdesk:
The deployed manpower must be well-versed with managing/ operating the proposed solution. The qualifications of the deployed manpower require to be vetted by IOCL. SI need to ensure that identified resource stay as part of the IOCL project for the entire duration of the project. In case of requirement (due to the resignation, sick etc) the resource replacement should be done in consultation and in agreement with IOCL. The replacement resource should be identified and onboarded to the project by giving proper handholding and technical training. The replacement resource should have similar experience and expertise on the platform. The shadowing should be done at least for a month and IOCL team may assess the replacement resource capability to be part of the IOCL project.

4.0 SPECIAL TERMS AND CONDITIONS

4.1 Project Phase and Milestone:

Details of different milestone for Software/Solution Development are as follows:

No.	Phase Milestone	Phase Timeline (in days)	Payment (% Payment of Total System Integrator Charges i.e., Line item 3 of BoQ
1	Information gathering, Requirement Study and solution Design	T+75 days	10%
2	API Development and Main Portal Dashboard	T+150	10%
3	Other Modules (all functional modules) and Data Integration with External End Points	T+195	10%
4	UAT Completion	T+225	20%
5	Rollout (Stage 1)	T+240	10%
6	Rollout (Stage 2)	T+255	20%
7	Final Go-Live (Complete Solution)	T+270	20%

Where T is date of acceptance of Work Order/Purchase order or 21 days from the date of issue of work order/ Purchase order, whichever is earlier.

Solution Development - Stage wise Deliverables

#	Stages	Deliverables
S1	Initial	Project Plan Security Plan Maintenance Plan Software Configuration Management Plan
S2	Requirement	Requirement specification document Requirement traceability matrix Security Plan
S3	Functional Design	Functional Design Document Logical Model Data Dictionary Requirements Traceability Matrix Security Plan

#	Stages	Deliverables
S4	System Design	Physical Model Program Specifications System Design Document Conversion/Migration Plan Test Plan & Test Reports Data Dictionary Requirements Traceability Matrix Software Configuration Management Plan Security Plan
S5	Coding/Build	Deployment Plan Requirement Traceability Matrix Test Plan Transition Plan/Migration Plan Operating Manual/Documents Training Plan Security Plan
S6	Testing	Integration and System Test Results/Reports Programmers Reference Manual Requirements Traceability Matrix Deployment plan Training Plan
S7	Implementation/Go-Live	Installation/Deployment test materials User training materials Maintenance Plan Transition Plan Conversion/Migration Plan Security Plan Project Plan Post Implementation Evaluation Report

The deliverables at each phase should be reviewed using a structured walk through by the respective team of IOCL and SI. Objective of the Structured walkthrough is to review the deliverables presented and conclude on the status of the deliverables which can be

- **Accepted**
- **Revise without any further walkthrough**
- **Revise and Schedule another walkthrough**

The purpose of the walkthrough is to provide constructive suggestions, pointing out technical errors, various findings, and clarifications to the various deliverables before being accepted.
The deliverables are reviewed for quality in terms of the following acceptance criteria (as applicable)

(a) Clarity
(b) Contractual Concerns
(c) Functional accuracy
(d) Performance Impact
(e) Standards (Project specific/ISO/CMMI/Industry)
(f) Scope
(g) Technical Content

(h) Value to IOCL

Project Development Phases with Payment Milestone

No	Phase Milestone	Deliverables
1	Information gathering, Requirement Study and solution Design	From S1, S2, S3 & S4
2	API Development and Main Portal Dashboard	From S5 & S6 related to API and Main Portal
3	Other Modules (all functional modules) and Data Integration with External End Points	From S5 & S6 related
4	UAT Completion	S6 - UAT acceptance
5	Rollout (Stage 1)	Successful rollout report including active migration of the concerned RO
6	Rollout (Stage 2)	Successful rollout report including active migration of the concerned RO/CPs
7	Final Go-Live (Complete Solution)	From S7

Structured Walkthrough Objective

Stage	Review
Initial	each of the deliverables
Requirements	to identify problems, inaccuracies, ambiguities, and omissions in the requirement specifications
Functional Design	to identify flaws, weaknesses, errors, and omissions in the architecture of the design
System Design	to review detailed specifications and plans that address testing and implementation issues.
Coding/Build	on deliverables such as programs, test plans, test cases, and the operating documentation
Testing	to review the integrated product, check the accuracy of the operating documents that will be provided to the user(s) and programmer(s), and the acceptance activities
Implementation/Go-Live	to check the Acceptance Test Report and inspect the plans for activities performed in preparation for full-scale production

The walkthrough either in a formal setting or informal setting (through email/collaboration portal) should provide feedback in the form of Action Items/Errors/Issues/Risks/Suggestions.

4.1.1 Milestones and Penalty on Delay in Deliverables:

No.	Phase Milestone	Phase Timeline (in days)	Price Adjustment	Adjustment to be made from

1.	Information gathering, Requirement Study and solution Design	T+75 days	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
2.	API Development and Main Portal Dashboard	T+150	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
3.	Other Modules (all functional modules) and Data Integration with External End Points	T+195	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
4.	UAT Completion	T+225	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
5.	Rollout (Stage 1)	T+240	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
6.	Rollout (Stage 2)	T+255	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.
7.	Final Go-Live (Complete Solution)	T+270	0.5% per week of the total cost of Total System Integrator Charges i.e., Line item 3 of BoQ	Invoices raised for the payment of that milestone.

Where T is date of acceptance of Work Order/Purchase order or 21 days from the date of issue work order/ Purchase order, whichever is earlier.

4.1.2 Phase 1: Information gathering and solution design:

1. Review and ascertain the vision and objective for the solution
2. Understand the nuances, technical and functional specifications for the current applications
3. Design integrated solution architecture to deliver business and functional requirements (as detailed in the Scope of Work). The solution design shall have seamless integration among all

the constituent components and shall include the application architecture, user interface, database models, security/user access details, etc.

4. Analyse any additional system requirements at IOC end and detail the overall solution design & system infrastructure including communications, integration, and compatibility with existing IOC system as required.
5. Understanding and gathering detailed functional requirement from business team.
6. Align necessary OEM/CSP support basis prior approval from IOCL and also ensuring the CSP's subscription is in the name of IOCL.

4.1.3 Phase 2: API Development and Main Portal Dashboard

1. Develop and integrate all components of the proposed solution, in a manner that all functional and business requirements are captured.
2. Provision for the test and development environments on the cloud.
3. Periodic reviews to be done with concerned business point of contact.
4. Security checking and audits as per IOCL requirements.
5. Align necessary OEM/CSP support basis prior approval from IOCL.

4.1.4 Phase 3: Other Modules (all functional modules) and Data Integration with External End Points

1. Development of functional module as per the IOCL requirement.
2. Data Integration with external end points and external entity.
3. Establishment of network and connectivity to connect with other external end points.

4.1.5 Phase 4: UAT Completion

4. Prepare test strategy and plan.
5. Train IOCL users for User Acceptance Test (UAT).
6. Supervise the overall testing.
7. Provide test reports and results.
8. For UAT approval, IOC EIC may review solution aspects and the EIC shall align on metrics for UAT sign-off during implementation with the bidder.
9. Align necessary OEM/CSP support basis prior approval from IOCL.

4.1.6 Phase 5-7: Rollout and Migration (Stage-1 and Stage-2)

1. Shift/migrate the application from Development / Pre-production hosted environment to a fully scaled-up Production/Go Live environment
2. Deployment strategy and plan for Production environment
3. Entire solution will be developed and tested.
4. Development and deployment of any functional and business change.
5. Implementation of IRAS will be done in phases (all ROs which are connected and sending data to the existing on-premises solution need to be considered for the final go-live)
   - 1st Phase will be done with 100 ROs
   - 2nd Phase will be done with 10000 ROs
   - 3rd Phase will be done for all remaining ROs

   1st Phase will be basically a test phase which will be monitored closely and based on observations solution will be modified and fine-tuned.

6. Implementation of ICPAS will be done after successful implementation of IRAS 2nd Phase.
7. Data migration plan for existing data in existing system.
8. Post-deployment checks
9. Support through completion of stabilization, system monitoring, and optimization

10. Provide detailed documentation and all customizations
11. Establish value measurement KPIs, baseline, value tracking, change management and value realization methodology
12. Align necessary OEM/CSP support basis prior approval from IOCL
13. Carry out the capacity planning in advance, in consultation with IOCL to identify & provision, where necessary, the additional capacity to meet the user growth and / or the peak load requirements to support the scalability and performance requirements of the solution.
14. Any new RO/CP which is getting automated also needs to be on-boarded in this solution as and when required by IOCL.
15. **Migration:**

Existing on-premises IRAS+ICPAS along with their sub-system shall be migrated to cloud infrastructure as per the scope.

14.1 Migration Planning and process:

1. Bidder shall provide and provision relevant tools and services required for migration and replication of data from on-premises solution to the new solution in cloud.
2. Procedures and documentation to be developed for migration of applications and data & content including redevelopment/additional development that may be required.
3. Bidder shall carry required change management, training needs and test plans for verifying successful migration.
4. Complete architectural understanding of the existing applications and processes necessary for successful migration of the applications and data as well as continued operation and maintenance of the services.
5. Analysis of the interdependencies such as application dependencies, etc.
6. Provision the necessary platform/solution on the cloud including the necessary licenses to host the Application Suite that meet or exceed the day-1 minimum capacity.

14.2 Data Migration Requirements (on-premises system to new system in cloud)

1. New solutions will replace current IRAS and ICPAS solutions. Solution can be rolled out in two phases.
    - Phase-1: Complete IRAS and subsystem
    - Phase-2: Complete ICPAS and subsystem
2. Bidder shall be responsible for management (including project managing), coordinating and planning all aspects of migration.
3. Bidder shall migrate Master data and transactional data for last 3 years.
4. Bidder shall Proactively identify, monitor, and manage any significant risks or issues in relation to migration.
5. Provide regular progress reports to the IOCL:
    - A listing of all Migration Deliverables and Milestones, including acceptance status, the estimated time to completion, days overdue, planned completion date, and actual completion date and comments, as well as a report identifying the status of all Milestones (for example: red, amber, green)
    - A listing of all unresolved issues related to the execution of the Migration Plan, along with due dates, priority, responsible party, and an assessment of the potential and actual business impact and impact to the Migration Plan.
6. Transactional data migration required for at least the last 3 months.
7. Also, for analytical use cases historical data will be required in Data Warehouse. Bidder should also provide the approach for migration of data to new system.
8. **Go-Live:** Go-live date will start from the date of successful roll-out at 100 Nos. of ROs.

4.1.7 Phase 8: Training

1. The bidder is required to provide the necessary training to IOCL's key stakeholders during the period of the contract.
2. The bidder needs to conduct a 'Training Needs Assessment' (TNA) and impart Training to the Users as per Groups defined, according to their individual needs and requirements. The SI shall propose the indicative Training plan. The objective for the training should be clearly defined and pre and post assessment of the individuals to be carried out. Based on the post training assessment further individual training / handholding to be carried out by the bidder.
3. The schedule / training calendar and the training material for imparting training shall be developed by the SI in consultation with IOCL. The SI shall submit a softcopy of the training material to IOCL Team before every training session.
4. A detailed training schedule, including the dates, topics to be covered, time and the training literature (to be supplied by bidder) at various stages of the project cycle and feedback for effectiveness will be agreed to by all parties during the performance evaluation of the bidder as per the Contract.
5. An indicative training requirement details are as follows:

5.1 Type of Users: Following users shall be covered under training program by bidder:

- **Development Core-Group Users:** Developers (Cloud Platform and DevOps)
- **Application Administration User:** These are the admin users who understand the application from administration perspective so as to be able to configure access rights, groups, password maintenance etc. from the admin interface of the proposed solution and its platform.
- **Platform Administrators: Cloud Platform Monitoring and Security**
- **Cloud and Solution Billing Dashboard including SLA Monitoring and billing**

All the training should be instructor led training either at IOCL Office at Mumbai or through online classroom. Wherever required the training should be hands on.

5.2 Types of Training: The bidder shall impart following trainings to IOC users based on their roles and responsibility.

a. **Solution Overview**: High level overview technical and functional. This training should cover the entire landscape of the proposed solution including the cloud platform components for at least 2 days (1 batch)

b. **Solution Administrator Training**: This training for Application administration for managing admin functionalities like access rights, user classification into groups / departments, password reset etc. through the admin interface of the proposed solution.

Administrator training will be provided at Marketing Head Office of IOCL at Bandra for 3 days to a single batch of maximum 10 participants. (10)

c. **Software Development on Cloud (including DevOps) Training (2 batches Minimum): Bidder shall impart training to core team members of IS leading to enable them to design, develop and deploy new processes on the solution and also to carry out changes in the existing solution. Development user training will be provided in at least 2 batches for duration of minimum 10 days covering max 10 participants per batch. (20)**

d. **Platform Administrators including Cloud Platform Monitoring and Security (2 batches Minimum)** Training covering the cloud platform administration

including infrastructure like network and security and configuration management tools. The training should specifically be targeted to IOCL users for giving a deep dive on the configuration and administration of the platform & tools used in the solution. This should have 10 days covering 10 participants per batch.

e. **Cloud Billing and SLA monitoring – 1 batch.**
The cloud platform billing including the SLA monitoring and CSP & SI billing controls for minimum 5 days.

5.3 Training Documentation

Bidder shall provide following documents as part of training documents for different users based on their roles. Documentation shall be available in formats like (but not limited to) pdf, MS power points, MS word etc.:

1) User Guide
2) System Administrator Guide
3) Configuration Guide
4) Quick Reference Guide

4.1.8 Phase 7: Post deployment maintenance

A. Resource Management:

1. Maintenance of the new solution application and change management for 5 years after the completion of deployment (Go-live).
2. While the initial sizing & provisioning of the underlying infrastructure may be carried out based on the information provided in the RFP, subsequently, it is expected that the bidder, based on the growth in the user load (peak and non-peak periods; year-on-year increase), will scale up or scale down the services as per the performance requirements of the solution and meet the SLAs using the auto-scaling features provided by the CSP.
3. In addition to auto-scaling, for any major expected increase in the workloads, carry out the capacity planning in advance to identify & provision, where necessary, the additional capacity to meet the user growth and / or the peak load requirements to support the scalability and performance requirements of the solution.
4. The scaling up / scaling down (beyond the auto-scaling limits or whenever the autoscaling limits have to be changed) has to be carried out with prior approval by IOCL. The bidder shall provide the necessary details including the sizing calculations, assumptions, current workloads & utilizations, expected growth / demand and any other details justifying the request to scale up or scale down
5. Updates, upgrades, builds, patches, bug fixes and overall comprehensive maintenance for the solution and underlying components provided as a part of the solution by the successful bidder for the duration of the subscription period.
6. During stability period (i.e., initial 1st Year of AMC Period), bidder shall ensure that initial project team which was doing implementation should be available (at reduced number as per the maturity) for smooth functioning and resolving any issues as and when it arises. Any change in resource should be approved by IOCL.
7. Updating data, reviewing data and results, and code modification to meet accuracy SLAs and as per business requirement.

B. User Administration.

1. Implement Identity and Access Management (IAM) that properly separates users by their identified roles and responsibilities, thereby establishing least privilege and ensuring that users have only the permissions necessary to perform their assigned tasks.
2. Administration of users, identities, and authorizations, properly managing the root account, as well as any Identity and Access Management (IAM) users, groups, and roles they associated with the user account.
3. Offer fine-grained access controls including, conditions like time of the day, originating IP address, use of SSL certificates, or authentication with a multi-factor authentication device.
4. Provide a mechanism to test the effects of access control policies that are attached to users, groups, and roles before committing the policies into production. Support a policy validator to automatically examine non-compliant access control policies.
5. Implement multi-factor authentication (MFA) for the root account, as well as any privileged Identity and Access Management accounts associated with it.
6. Securely control users' access to Cloud services using a range of security credentials including passwords, key pairs, and X.509 certificates.

C. Usage Reporting and Billing Management

1. Track system usage and usage reports.
2. Monitoring, managing, and administering the monetary terms of SLAs and other billing related aspects
3. Provide the relevant reports including real time as well as past data/information/reports for IOCL to validate the billing and SLA related penalties.
4. Provide and implement tools and processes for monitoring the availability of assigned applications, measuring the service levels, application/Severs/Storage/Network performance and utilization responding to system outages with troubleshooting activities designed to identify and mitigate operational issues. The tool shall be capable of providing the exact utilization of servers and shall be able to generate per day, per month and per quarter utilization reports based on which the payments will be made to the Bidder.

D. Support for third party audits and Compliance

1. Enable the logs and monitoring as required to support for third party audits like ISO 27001
2. Enable third party vulnerability assessment and penetration testing as on when required.
3. Audit: Capability to provide and record logs of all user activity within a cloud environment including actions taken through the CSP's Management Console, CSP's SDKs, command line tools, and other CSP services. The recorded information includes the identity of the API caller, the time of the API call, the source IP address of the API caller, the request parameters, and the response elements returned by the Cloud service. The API activity history should be delivered within a reasonable timeframe (<30 minutes) from the time API call is made. Capability to support storing log files in a durable and inexpensive storage solution.
4. Network logs: Capability to capture information about the IP traffic going to and from network interfaces in your Private Cloud that can be used to troubleshoot why specific traffic is not reaching an instance, or as a security tool to monitor the traffic that is reaching your instance.
5. Governance and Compliance: Capability to discover all of cloud resources and view the configuration of each. Continuously monitor and record your Cloud resource configurations and allows you to automate the evaluation of recorded configurations against desired configurations. Receive notifications each time a configuration changes, as well as dig into the configuration history to perform incident analysis. Capability to obtain details of what a resource’s configuration looked like at any point in the past. Capability to notify every configuration change so customers can process these notifications programmatically.

E. Project Management

1. Successful bidder will form a project management team exclusive for this project who will work in close co-ordination with IOCL identified project team which will consist of both technical and functional users.
2. The team identified by the successful bidder should continue throughout the project and incase of any change required resource with sufficient expertise should be onboarded only after the consent from the IOCL. The bidder should also need to ensure the incoming resource should be trained in the IOCL project and complete knowledge transfer from the outgoing resource to be ensured. In case the new resource is not able to handle the assignment, bidder should change the resource as per the IOCL requirement.
3. Post go-live the solution should be supported by the bidder's project team as follows:
    (i) Initial period of 1 year after go-live: The project implementation team should be available for ensuring the solution is stabilized and changes as required during this period (based on feedback) is carried out during this period without any extra cost.
    (ii) Any changes (major in nature)

F. Others

1. Bidder to Advise IOCL on optimal operational practices, recommend deployment architectures for cloud infrastructures, design and implement automated scaling processes, day-to-day and emergency procedures, deploy and monitor underlying cloud services, performance reporting and metrics, and ensure the overall reliability and responsive operation of the underlying cloud services through both proactive planning and rapid situational response
2. Interface with the Cloud Service Provider(s) on behalf of IOCL for all activities including monitoring the reports (e.g., usage, security, SLA,), raising (or escalating) tickets / incidents and tracking the same to resolution
3. Prepare a comprehensive Operations and Maintenance (O&M) plan for managing the cloud services and keep it updated with any changes during the project.
4. Create and maintain all the necessary technical documentation, design documents, standard operating procedures, configurations required to continued operations and maintenance of cloud services.

4.2 Payment Terms:

1. The Successful Bidder shall submit Tax invoice and other documents necessary as per the terms and format, duly certified by IOCL official on each document to IOCL. The Successful Bidder shall be responsible for extending the validity date and claim period of all guarantees/warranties on account of any delay on the part of the Successful Bidder. No advance payment will be made.
2. Payment will be made only against receipt of the invoices(s).
3. The invoice submitted by the vendor should clearly mention all tax related components.
4. The selected bidder shall submit invoice and supporting documents at IOCL's Office where the material is supplied after which an authorised Officer of IOCL will duly authenticate each document and release payment.
5. No payment other than the rate / amount quoted in the tender would be paid by IOCL.
6. IOCL shall make payment after deducting any TDS as applicable as per prevailing taxation rules.
7. Bidders should also provide their consent for receiving payments through electronic fund transfers from IOC.
8. No advance payment will be made.
9. Payment will be made only against receipt of the invoices(s).
10. No payment other than the rate / amount quoted in the tender would be paid by IOCL.
11. Payment will be milestone based and will be done after the successful completion of the said milestone along with the deliverables.
12. For AMC, payment will be made on quarterly basis at the end of the quarter on submission of invoices and other relevant documents.
13. For Cloud usage, payment will be on a pay-as-you-go model as per the actual use of the quantity subjected to the maximum capping as per the rate quoted.
14. Payment will be made after adjustment of the price discount against SLA.

4.2.1 SCHEDULE OF PAYMENT:

Sl. No.	Item Description (Line Item of BoQ)	Payment Schedule
1	**Cloud Services Charges**	
1.01	IRAS - API & Portal- 1st slab (After Go-live) (Upto 800 Million Transaction per month)	Starts immediately after start of successful Rollouts of ROs on production Environment. Payment will be based on monthly basis in arrears after deduction of penalty, if any. Payment will be based on the actual cloud charges (as mentioned in the cloud item wise billing sheet from CSP) pay-as-you-go model but will be subject to the maximum capping as per the quoted transaction rate against the line item.
1.02	IRAS - API & Portal- 2nd Slab (After Go-live) (From 800 million to 2000 Million Transaction per month)	Same as above
1.03	ICPAS - API & Portal: (After Go-live)	Same as above

1.04	Additional Data Integration with external endpoints (For both consumer and provider of service) (In addition to external integrations specified in scope of work)	Would be paid on execution. Payment will be based on the actual cloud charges (as mentioned in the cloud item wise billing sheet from CSP) pay-as-you-go model but will be subject to the maximum capping as per the quoted transaction rate against the line item.
1.05	IRAS: Design, Development UAT Services- One time Charge	Payment will be made paid as per the phase milestone as defined in **Section 4.1, milestone 2,3 and 4.** Payment will be based on the actual cloud charges (as mentioned in the cloud item wise billing sheet from CSP) pay-as-you-go model but will be subject to the maximum capping as per the quoted transaction rate against the line item.
1.06	ICPAS: Design, Development UAT Services- One time Charge	Same as above.
2	**OEM Professional Services cost**	
2.01	Cloud Services-OEM/CSP Professional Services	Would be paid on actual consumption basis. These services will be consumed as an when required by IOCL for any additional scope. Bidder shall have their own separate OEM Professional service agreement to meet the requirement mentioned in the RFP.
3	**System Integrator Charges- Installation, Commissioning, Development, Configuration, Testing and Implementation cost**	
3.01	Blueprinting, Development, Configuration, Testing and Implementation - including custom development of APIs, Web/App portal, processes, reporting, serverless and responsive portal for IRAS as per the scope.	Payment schedule mentioned in Section 4.1 above (Project Milestone)
3.02	Blueprinting, Development, Configuration, Testing and Implementation - including custom development of APIs, Web/App portal, processes, reporting serverless and responsive portal for ICPAS as per the scope.	Payment schedule mentioned in Section 4.1 above (Project Milestone)
4	**Operational Support and Maintenance Cost**	
4.01	Support And AMC Cost -1st Year	Support and AMC cost for initial First Year. Period will start from Go-Live Date. Would be made on quarterly basis in arrears after adjustment of deduction, if any.
4.02	Support And AMC Cost -2nd to 5th	Support and AMC cost for 2nd to 5th Year.

		Would be made on quarterly basis in arrears after adjustment of deduction, if any.
4.03	Cost for Additional man-hour for development efforts: For Change Request- **Project Manager**	These services will be consumed as an when required by IOCL for any additional scope. Would be paid on actual consumption basis.
4.04	Cost for Additional man-hour for development efforts: For Change request- **Project Lead/Solution Architect**	Same as above.
4.05	Cost for Additional man-hour for development efforts: For Change request- **Functional Developer / Tester /BA**	Same as above.
4.06	Cost for Additional man-hour for development efforts: For Change request- **Technical Developer / Tester**	Same as above.
4.07	Tools and Solution Management	Period will start from Go-Live Date. Would be made on quarterly basis in arrears after adjustment of deduction, if any
5	**Cloud Termination and Solution Migration cost**	
5.01	Cloud Termination & Exit Charges	Would be paid on execution of respective line item.
5.02	Solution Migration Charges from one CSP to another CSP	Same as above.
5.03	Data retention charges beyond 45 days	Same as above.
6	**Other Cost**	
6.01	VAPT and Audit Charges of whole Solution	Same as above.
6.02	Training For IOCL	Same as above.

15. The offer shall be valid for a period of 180 days from the date of opening of technical bid and the same will remain unchanged after placement of work order till completion of the delivery of the Solution and performance of all obligations under the Contract. IOCL shall have the right and absolute discretion to place further orders on the Successful Bidder for the Bill of Materials in full or in part, for any future requirements within the period of the Contract. Any such orders placed, shall be governed by the Contract and the agreed terms after the final evaluation of the bid.

4.3 Cloud Bill Calculation:

A. Bidders are requested to kindly provide final price in the price bid.
B. Committed/minimum transaction will be 800M per month for IRAS.
C. Committed transaction will be 10M per month for ICPAS.
D. For the cloud component part:
- The rate quoted in the BOQ will be considered for commercial evaluation and will be the maximum rate.
- The payment will be based on the actual cloud charges (as mentioned in the cloud item wise billing sheet from CSP) pay-as-you-go model but will be subject to the

maximum capping as per the finalized transaction rate. The rate x transaction (consumed) will work as the maximum capping for the CSP bill.

e.g., if the number of transactions for Jan, Feb & Mar where 1200, 750 & 1500 million transactions.

- The finalized rate for each million transaction be Rs 100/-. Then the payment against the cloud charges will be capped at Rs 3,50,000/- (Total transactions 3500 [1200+800+1500] and the rate is 100, so total is 3500 X 100 = 3,50,000/-).
- If the cloud charges in the CSP billing portal for the JFM quarter comes to be 2,50,000/- then the payment will be limited to 2,50,000/- and if the cloud charges for the JFM quarter comes as Rs 3,60,000/- then the payment will be capped by IOCL as per the contract to Rs 3,50,000/-.

Illustration of different cases:

Let us assume the finalized transaction rate is Rs 100/- per 1 million transaction.

❖ **Scenario A:**

Period	Jan	Feb	Mar	Total
Cloud Bill Amount	110,000	100,000	120,000	330,000
Transactions (in Millions)	1200	750	1500	3450
Value as per Txn rate	120,000	75,000	150,000	345,000
Min Committed tran/month	800	800	800	2400
Value as per min committed tran/month	80,000	80,000	80,000	240,000
Pay as you go model subject to transaction rate X min committed transaction	110,000	80,000	120,000	310,000

➢ *In above Scenario A* - **IOCL will pay 310,000/-**

❖ **Scenario B:**

Period	Jan	Feb	Mar	Total
Cloud Bill Amount	110,000	80,000	120,000	310,000
Transactions (in Millions)	1200	750	1500	3450
Value as per Txn rate	120,000	75,000	150,000	345,000
Min Committed tran/month	800	800	800	2400
Value as per min committed tran/month	80,000	80,000	80,000	240,000
Pay as you go model subject to transaction rate X min committed transaction	110,000	80,000	120,000	310,000

➢ *In above Scenario B* - **IOCL Will pay 310,000/-**

❖ **Scenario C:**

Period	Jan	Feb	Mar	Total
Cloud Bill Amount	110,000	60,000	120,000	290,000
Transactions (in Millions)	1200	750	1500	3450
Value as per Txn rate	120,000	75,000	150,000	345,000
Min Committed tran/month	800	800	800	2400
Value as per min committed tran/month	80,000	80,000	80,000	240,000
Pay as you go model subject to transaction rate X min committed transaction	110,000	60,000	120,000	290,000

➢ *In above Scenario C* - **IOCL will pay 290,000/-**

4.4 Service Level Agreement:

Service Level Agreement (SLA) define the quality and timeliness of service delivery during the Operations and Maintenance (O&M) phase of a project. SLA helps the IOCL sustain the planned business outcomes from the solution deployed on a continued basis over a sustained period of time.

A. Purpose of this Agreement

a) The purpose of this SLA is to clearly define the service level standards in terms of availability, Performance quality and timelines to be provided by SI and further enforce it on SI. SLA in this project shall be in effect for the entire contract period (5 years from the day of Go-live and any extension thereof).

b) The SLA is designed to:

i. Define unambiguously the service level standards expected from the SI and also ensure that the desired/ agreed level of services is rendered by the SI to IOCL.
ii. Motivate SI to ensure the service standards are up to the mark.
iii. Draw the urgent attention of SI in case there is any issues in the service levels or service level falls below the agreed/desired level.
iv. Provide a tool to IOCL to control and ensure the service levels provided by SI.
v. Avoid imposing penalty on SI without valid reason.

B. Escalation Mechanism

The SLA provides the Levels of support to be provided by the SI along with other important information like criticality of reported incident, incident escalations, responsible office(s) and expected time to resolve the incident. The following characteristics are used to identify the severity of an incident.

i. Business and financial exposure
ii. Work outage
iii. Number of end-users affected
iv. Workaround
v. Acceptable resolution time

A given problem must be judged against each of the characteristics to make an overall assessment of which severity level best describes the incident. The designated officer and SI's helpdesk staff may jointly determine the initial severity rating for the report.

Table 1: Escalation Matrix

Escalation Level	Escalation Criteria	Responsible Officer
Level 1	Lower Performance	1) SI's helpdesk executive/ SPOC for the IRAS/ICPAS project 2) EIC/OIC of IRAS/ICPAS System of Information System Department, Marketing HO, IOCL

Level 2	Non-compliance	1) Project Manager of IRAS/ICPAS project 2) Senior Executive / Team Lead of Information Systems Department, Marketing HO, IOCL
Level 3	Issues/ Non-compliances are persisting time and again	1) Project Director for IRAS/ICPAS project 2) Administrative Head of Information Systems Department, Marketing Head Office, IOCL

C. Service Levels

SI is expected to provide the following service levels. In case these service levels cannot be achieved at service levels defined in the tables below, it shall invoke the related penalties. Payments to the SI are linked to the compliance with the SLA metrics laid down in the tables below.

1. Application SLA

a) Penalty for any breach of Application SLA will be deducted against the quarterly payment of AMC and Tools& Solution Management.
b) The matrix specifies three levels of services namely, Baseline, Lower Performance and Non-compliance.
c) The points earned during each quarter will be added to compute the net score out of 100 (in percentage). This percentage will be applied to the quarterly payment to arrive at the amount payable to the SI for that quarter.
d) The penalties will be calculated as explained in this section.
   i. The SI will get 100% of the quarterly payment if the baseline performance metrics are complied.
   ii. In case of lower performance and/or non-compliance, the final payable quarterly amount will be calculated using following formula:

Quarterly Payable Amount = QA× (LPM + NCM) / 100
QA = Quarterly Amount
LPM = Sum of Lower Performance Marks
NCM = Sum of Non-compliance Marks

   iii. In case sum of lower performance and/or non-compliance marks less than 80 (Eighty) marks in any quarter, IOCL may treated it as breach of SLA and may initiate the termination of contract as per the termination clause of this RFP.

Table: Service Level Standards and Performance Metrics

SLA No.	Description	Measurement Methodology	Target	Marks
A. Availability of IRAS/ICPAS API, Web Portal and Other Solutions				

A.1	Availability of Services for API Endpoints & users	Measured as availability of select set of end-to-end services that when executed, cover the underlying solution and infrastructure components (e.g., IRAS/ICPAS API, web portal, cloud platform, External Integration services/endpoints/data push etc.) The services shall be measured on 24×7×365.	Critical API **Baseline:** >=99.9% **Lower Perf.:** <99.9% and >= 98% **Non-compliance:** <98% Other API, Portal and Solution **Baseline:** >= 99.5% **Lower Perf.:** <99.5% and >=98% **Non-Compliance:** < 98%	**Baseline: 30** **Lower Perf.: 10 marks will be debited quarterly from baseline marks** **Non-compliance: 20 marks will be debited quarterly from baseline marks**
A.2	Recovery Time Objective (RTO)	Measured during the regular planned/ unplanned or Cloud Platform/ Data Center outage	**Baseline:** <= 5 mins **Lower Perf.:** <=30 mins and >5 mins **Non-compliance:** > 30 mins	**Baseline: 5** **Lower Perf.: 1 mark for each instance will be debited from baseline marks** **Non-compliance: 2 marks for each instance will be debited from baseline marks**
B. Performance of IRAS/ICPAS Application API and Web Portal				

B.1	Time for API endpoint response for call originating from ROs and CPs.	Total time taken by solution for a successful response. Response time to be measured using APM tool which is provided and provisioned by bidder.	**Baseline:** >=95% of the transactions take less than or equal to 150ms **Lower Perf.:** <95% and >=85% of the transactions take less than or equal to 150ms. **Non-compliance:** < 85% of the transactions take less than or equal to 150ms.	**Baseline: 20** **Lower Perf.: 5 marks will be debited quarterly from baseline marks** **Non-compliance: .: 10 marks will be debited quarterly from baseline marks**
B.2	Time to load login page or any other page of the portal that can be viewed by the users without logging into the system (publicly accessible pages)	The time includes the cumulative time of sending the request from a dedicated IOCL machine over internet to the cloud platform till the time the page fully loads on the machine. The pages will be defined by IOCL based on the criticality and number of visits to the page.	**Baseline:** >=95% of the transactions take less than or equal to 1 seconds **Lower Perf.:** <95% and >=90% of the transactions take less than or equal to 1 seconds **Non-compliance:** <90% of the transactions take less than or equal to 1 seconds.	**Baseline: 5** **Lower Perf.: 1 marks will be debited from baseline marks** **Non-compliance: 2 marks will be debited from baseline marks**
B.3	Request-Response Time of various forms and services accessed by the users (e.g., login and loading of dashboard (default page).	The time is the elapsed time between the time requests (submission of Complete Form) is submitted and the time response (acknowledgement) is received back. Irrespective of the transaction type, any third party/ external	**Baseline:** >=95% of the transactions take less than or equal to 3 seconds **Lower Perf.:** <95% and >=90% of the transactions take	**Baseline: 5** **Lower Perf.:**

		agency transaction times will be subtracted from the total elapsed time. Measurement will be on real time transactions. The response time will be measured within the cloud platform environment between the first entry and last exit point.	less than or equal to 3 seconds **Non-compliance:** < 90% of the transactions take less than or equal to 3 seconds	**1 mark will be debited from baseline marks** **Non-compliance: 2 marks will be debited from baseline marks**
B.4	All operational reports response	Should fetch data and generate response irrespective of volume of data to churn and concurrent users in less than a minute To be measured using APM tool or monitoring tool against all such reports or few sample reports	**Baseline:** >= 95% **Lower Perf.:** <95% and >=90% **Non-Compliance:** < 90%	**Baseline: 5** **Lower Perf.: 1 mark will be debited quarterly from baseline marks** **Non-compliance: 3 marks will be debited quarterly from baseline marks**
B.5	Maximum # of 4xx and 5xx errors at peak load (Server side)	Number of HTTP 4xx and 5xx errors returned. Measurement will be on real time transactions using APM/tool	**Baseline:** <=2% **Lower Perf.:** > 2% and <=5% **Non-compliance:** >5%	**Baseline: 5** **Lower Perf.: 1 mark will be debited from baseline marks** **Non-compliance: 2 mark will be debited from baseline marks**
C - Performance of Support				
C.1	Resolution of Tickets logged by IOCL user (except Tickets for	Measurement of time taken in resolution, from ticket logging time at Help Desk System till the resolution is provided. The	**Baseline:** **Level-1 Tickets** >=95% should be resolved within 2	**Baseline: 10**

	generation of custom/ ad- hoc reports)	tickets include turnaround time for platform, infrastructure, and also incident reporting of application malfunction Level 1: Operational Issues / Business Outage Level 2: Workaround available Level 3: Modifications or bug fixes	hours, remaining 5% within 4 hours. **Level-2 tickets** >=95% should be resolved within 1 days, remaining 5% within 2 days **Level-3 tickets** >=95% should be resolved within 2 days and remaining 5% within 4 days. **Lower Perf.:** **Level 1 tickets** >=95% should be resolved within 4 hours, remaining 5% within 8 Hrs. **Level 2 tickets** >=95% should be resolved within 2 days, remaining 5% within 3 days: **Level 3 tickets** >=95% should be resolved within 3 days and remaining 5% within 5 days. **Non-compliance:** Anything more than above.	**Lower Perf.:** **2 marks will be debited from baseline marks** **Non-compliance:** **5 marks will be debited from baseline marks**
D - Service Level for Change Request				

D.1	Analysis, Evaluation, and Implementation of Change Request	Measurement of time (T) taken in analyzing, evaluating, and implementing the Change Request, as jointly decided by Bidder and IOCL.	Baseline: Change Requests should be rolled out within T days from the date of approval from IOCL (or as accepted by IOCL) * Lower Perf.: Delay by (Up to 20% of T days) in completing the implementation of Change Requests from the approved timeline Non-compliance: Default of the Lower *The commercial implications, if any, of the change request will be determined as per the Schedule of Services in the RFP.	**Baseline: 10** **Lower Perf.: 1 mark for each instance will be debited from baseline marks** **Non-compliance: 2 marks for each instance will be debited from baseline marks**
E - Audit & Monitoring				
E.1	**Non-closure of audit / assessment / VAPT observations**	**No observation to be repeated in the next audit**	Baseline: **All audit observations to be closed within defined timelines** Lower-Perf.: **> 0 % & <= 10% of audit observations repeated in the next audit** Non-Compliance: **> 10 % of audit observations repeated in the next audit**	**Baseline: 5** **Lower Perf.: 1 mark will be debited from baseline marks** **Non-compliance: 2 marks will be debited from baseline marks**

Summarized Solution & Support SLA:

		Baseline	Lower Perf.	Non-Perf.
A	**Availability**	**35**	**24**	**13**
A.1	Availability of the Solution	30	20	10
A.2	RTO	5	4	3
B	**Solution Performance**	**40**	**31**	**21**
B.1	API Response	20	15	10
B.2	Page Load	5	4	3
B.3	Request-Response time	5	4	3
B.4	Reports Response	5	4	2
B.5	HTTP Errors	5	4	3
C	**Support Performance**	**10**	**8**	**5**
C.1	Resolution	10	8	5
D	**Change Request**	**10**	**9**	**8**
D.1	Implementation	10	9	8
E	**Audit & Monitoring**	**5**	**4**	**3**
E.1	Non-Closure	5	4	3
	Total	**100**	**76**	**50**

2. SLAs for the Platform

a) Penalty for any breach of Platform SLAs will be deducted against the monthly payment of Cloud Bill.

b) Uptime availability will be calculated using below formula:

Uptime Calculation for the calendar month: - {[(Uptime Hours in the calendar month) / Total No. of Hours in the calendar month] x 100}

S.No. #	Service Level Objective	Definition	Target	Penalty
PA - Availability				
PA.1	Availability of each cloud service (Uptime) Applicable for all Cloud Service used in the solution)	Availability means, the aggregate number of hours in a calendar month during which cloud service is actually available for services	Availability for each of the cloud service>=99.5%	Penalty amount as indicated below (per occurrence): a) <99.5% to >= 99.00% - 10% of monthly Payment of respective cloud Services. b) <99.00% to >= 98.50% - 15% of monthly Payment of the respective cloud Services c) <98.50% to >= 98.00% - 20% of monthly Payment of the respective cloud Services

				d) <98% - 30% of the monthly Payment of the respective cloud Services In case the services are not available for a continuous period of 8 Business Hours (anytime between 8 AM to 10 PM) on any day, penalty shall be 100% of the monthly Payment of the respective cloud Services.
PB - Security				
PB.1	Security Incident (Malware Attack/ Security breach/Denial of Service Attack/ Data Theft/ Loss of data/ Intrusion/Corruption/DDoS or Defacement)	Any incident wherein system including all cloud-based services and components are compromised or any case wherein data theft occurs	No breach	For each occurrence of any of the attacks (Malware attack / Denial of Service attack / Intrusion / Data Theft): 10% of the monthly Payment of the cloud Services. These penalties will not be part of overall SLA penalties cap per month. In case of serious breach of security wherein the data is stolen or corrupted, IOC reserves the right to terminate the contract.

Table A: Severity Levels

Severity Level	Description
Severity 1	Key Component/Services of the Environment is down or major malfunction resulting in an inoperative condition or disrupts critical business functions and requires immediate attention. A significant number of end users and ROs are unable to reasonably perform their normal activities as essential functions and critical programs are either not working or are not available.
Severity 2	Loss of performance resulting in end users/ROs being unable to perform their normal activities as essential functions and critical programs are partially available or severely restricted. Inconvenient workaround or no workaround exists. The environment/solution is usable but severely limited.
Severity 3	Moderate loss of performance resulting in multiple end users impacted in their normal functions.

Severity Level for different case will be defined by authorized IOCL's EIC based on the impact and above definition of Severity

D. SLA Supervision:

a) Reporting Procedures: The SI shall prepare the SLA compliance reports of each quarter in an agreed upon format by the 10th calendar day of subsequent quarter. The reports will include details of each, and every incident reported to SI i.e., date and time of receiving call/ email, date and time of response/ acknowledgement email, date and time of resolution provided for the reported problem, name of the module/ functionality which not working upto the mark. Total number of incident reported, total number and % of compliance to the service levels, total number and % of non- compliance to the service level etc. The reports along with all the documentary proofs i.e., report from Service Management Tool about up & down time, response time etc., report from Service Management Tool with details of all the incident reported through phone call/ emails, acknowledgement email/ communication, resolution email/ communication, user feedback (if any) etc. and will be submitted to IOCL in hardcopy as well as softcopy format. However actual reporting mechanism, format and list of supporting documents will be discussed and finalized by the SI with IOCL before entering into AMC phase.

b) Monitoring and Auditing: Nodal officer of the IOCL or its authorized representative (auditor/consultant appointed by IOCL) will be responsible for monitoring the performance of SI against the SLA parameters each quarter, or at any periodicity defined in the contract document/ mutually decided by the both the parties. The review/ audit report prepared based on the performance report, will form basis for any action relating to imposing penalty or breach of contract. Any such review/ audit can be scheduled as and when required. The results will be shared with the SI as soon as possible. IOCL reserves the right to ask SI to provide performance report anytime during the contract period and to appoint a third-

party auditor to validate the SLA.

E. SLA Change Control

a) The present SLA has been worked out on the basis of current business needs of IOCL. However, as the system evolves over the time, the IOCL's business needs also evolve over the course of the contract period. In view of this requirement of changing the SLA may also arise.
b) Any request for change in the service levels provided during the term of this agreement shall be documented and negotiated in good faith by both parties. Either party can request for a change. Changes will be documented as an addendum to SLA and consequently the contract.
c) If in case there is any confusion or conflict between Final RFP document and the Contract, the Contract and subsequent amendments, if any, shall prevail.

F. SLA Change Process

a) Both the parties may amend this SLA by mutual agreement in accordance.
b) Changes can be proposed by either party.
c) Normally the forum for negotiating SLA changes will be IOCL's review meetings.

G. Version Control

All negotiated SLA changes will require changing the version control number. As appropriate, minor changes may be accumulated for periodic release (e.g., every quarter) or for release when a critical threshold of change has occurred.

H. Issue Management Process

This process provides an appropriate management structure for the orderly consideration and resolution of business and operational issues in the event that quick consensus is not reached between IOCL and SI. It is expected that this pre-defined process will only be used on an exception basis if issues are not resolved at lower management levels

a) Either IOCL or SI may raise an issue by documenting the business or technical problem, which presents a reasonably objective summary of both points of view and identifies specific points of disagreement with possible solutions.
b) IOCL will determine which committee or executive level should logically be involved in resolution.
c) A meeting or conference call may be conducted to resolve the issue in a timely manner. The documented issues will be distributed to the participants at least 24 hours prior to the discussion if the issue is not an emergency requiring immediate attention.
d) Management of IOCL and SI will develop a temporary, if needed, and the permanent solution for the problem at hand. The SI will then communicate the resolution to all interested parties.
e) In the event a significant business issue is still unresolved, the arbitration procedures described in the Contract will be used.

I. Issue Escalation Process

a) All issues would be raised to the project management team, which is completely

responsible for the day-to-day aspects of the implementation. The project management team shall classify the issues based on their severity level and resolve them within appropriate timelines.

b) If project management team is unable to resolve an issue, the issue would be escalated to the top management with options/ risks detailed for decision. Top management will make decisions based on the options/ risks presented by the IT team.

c) In case one or both the parties are unsatisfied with the decision of the top management of IOCL, the dispute will be resolved as specified in this RFP.

J. Risk and Cost factor

a) In the event of termination of contract on the basis of non-performance by the SI as per SLA, SI will be solely responsible for risk and cost factor thereon. In such an event, the performance Bank Guarantee furnished by the SI will be encashed and will stand forfeited.

K. Breach of SLA

a) In case the SI does not meet the service levels mentioned above in application SLAs and sum of marks of lower performance and/or non-compliance exceeds 20 (twenty) marks in the given quarter, IOCL will treat it as a case of breach of Service Level Agreement and may go for termination of contract as per the termination clause of this RFP.

b) The maximum penalty at any point of time on an additive basis in any quarter shall not exceed 50% of quarterly payments, it will result in a material breach. In case of a material breach, the operator will be given a cure period of one month to rectify the breach failing which a notice to terminate may be issued by the Department.

L. Exclusions

The SI will be exempted from any non-compliance/delays/slippages on SLA parameters arisingout of following reasons:

a) Delay in execution due to delay (in approval, review etc.) from IOCL side. Any such delays will be notified in written to the IOCL.

b) Force Majeure

c) The network links (if any) will be provided by a third party and the SI will monitor and report any problems on behalf of third party. If SI notifies and IOCL approves that the delay or fault was due to the third-party link services, then such loss will not be considered for tracking SI's SLA parameters (Also reduced from total service time).

4.5 Project Methodology:

A. Monthly Reporting

a) The SI shall submit the monthly report to the IOCL. Which shall include major activities carried out by different deployed teams, attendance of the deployed team members, detailed report generated from portals along with SLA calculations etc. The detailed format of the report shall be discussed and finalized by the SI in consultation with IOCL before entering the AMC phase.

B. Project Management

a) The SI shall deploy a full-time Project Management team for this project and a "Project

Manager" who would be the single point of contact (SPOC) for IOCL for monitoring day-to-day progress on the Project.

b) SI shall also deploy a domain expert from CSP for review of the solution being implemented. These experts will be deployed along with the SI team for the entire duration of implementation and will be responsible for ensuring the optimal design, development, configuration and testing of these modules.
c) The Project manager would be required to interact regularly with IOCL to address issues or provide updates regarding project progress. To facilitate this interaction, a Program Management Unit PMU would be constituted by the IOCL top management. The Project Manager will interact with the PMU for any issue related with Project or cooperation for the success of the project.
d) The SI is required to give access to IOCL officials / PMU on the project management tool which will be used by the SI for their internal project management purpose. This will help IOCL/ PMU to get real time actual updates/ status of the project implementation.
e) SI shall ensure timely delivery of all the deliverables related to proposed IRAS/ICPAS solution.
f) SI shall supervise and ensure implementation and commissioning of IRAS/ICPAS Solution as per the BOM supplied with the technical bid.
g) The project manager/ project management team shall co-ordinate with various internal as well as external stakeholders.
h) SI shall ensure that day-to-day issues related to the implementation of proposed IRAS/ICPAS Solution are handled and resolved immediately.
i) SI shall also monitor risk management related aspects and possible delays in project implementation.
j) IOCL will provide necessary infrastructure and support including sitting space for the entire implementation period.

C. Project Monitoring and Reporting

a) The Bidder shall describe the proposed project monitoring and reporting methodology in the technical bid of this RFP.
b) During implementation stage, SI shall submit a written project progress report every fortnight to IOCL for review of the progress made in the project. The frequency of report submission can be modified mutually during critical phases of the Project.
c) SI shall report exceptions and issues that require immediate attention of IOCL on a regular basis.
d) The SI's Project Management team will be responsible for updating the Program Management Unit (PMU)/ Steering committee of IOCL in progress review meetings to be held at periodic intervals.

4.6 Change Management

A. Change Request

a) IOCL may at any time, by a written order given to the SI, make changes within the general scope of the agreement i.e., Designs, specifications, requirements which software or service to be provided under the agreement, are to be specifically developed and rendered for the IOCL.
b) The solution being developed for an ongoing business operation in IOCL and is expected to change due to the nature of the business. Reasonable changes are expected in the

development phase including additional functions, features and integration requirement. Such changes if it is more than 20% of the total signed-off requirement then it will be considered for additional effort and will be decided as per the contractual provisions.

c) During the first year (After the system migration and go-live) of support, SI shall provision enhanced support to ensure the system is robust and stable and shouldn't suffer from any performance issues. Any such issue should be checked and resolved on a continuous and pro-active basis without any additional cost to IOCL. Post 1 year of enhanced support any additional feature request, additional performance requirement or new functional requirement is considered a billable change. Provided the total effort available for maintenance for the specific quarter is not exceeded. Any problem fixing including but not limited to bug fixing is not considered a change. Moreover, any change induced due to upgrade/patching of underlying system (however large) is not considered as change and is not billable and to be considered as part of the regular maintenance scope. In Similar manner, Cloud DC migration or region migration is to be considered at no cost to IOCL.

d) The change request/ management procedure will follow the following steps:
   i. Identification and documentation of the need for the change: The information related to initiator, initiation date and details of change required, and priority of the change will be documented by IOCL.
   ii. Analysis and evaluation of the Change Request: Impact of the change in terms of the estimated effort, changed schedule, cost and the items impacted will be analysed and documented by the SI.
   iii. Approval or disapproval of the change request: IOCL will approve or disapprove the change requested including the additional payments (as per the quoted man-day rate), after discussion with SI on the impact of the change on schedule.
   iv. Implementation of the change: The change will be implemented in accordance with the agreed cost, effort, and schedule by the SI.
   v. Verification of the change: The change will be verified by the IOCL on implementation of the change request.
   vi. All changes outside the scope of Schedule of Services agreed to herein which may have likely financial implications in terms of the overall cost/ time of the project shall be undertaken as per the change control schedule define in Master Service Agreement (MSA) after securing the express consent of the IOCL. In the event that the consent of IOCL is not received then the change will not be carried out.
   vii. While approving any change request, if required, IOCL may ask the SI to deploy the required resources on-site.

4.7 Configuration Management of Information System

Control: The configuration management of the information system under development shall follow the configuration management policy and procedure defined in "Configuration Management". Configuration management process as defined in "Configuration Management" controls the changes to the system during development and during subsequent changes during the entire duration of the system.

A. Configuration Management

a) Configuration Management Procedure

A formal documented configuration management procedure shall be defined addressing purpose, scope, roles & responsibilities, coordination among various activities/ functions associated with the information system, various controls applicable and its means of implementation and compliances shall be established.

b) Configuration Baselining

A current baseline configuration of the information system and its components shall be developed, documented, and maintained. The automatic mechanism / tools shall be employed to maintain an up-to-date, complete, reliable, accurate and readily available configuration of the information system

c) Configuration Change Control

The changes to the information system shall be controlled by the use of formal change control procedure. The automatic mechanism/ tools shall be employed to initiate changes/ change request, to notify the appropriate approval authority and to record the approval and implementation details

d) Monitoring Configuration Changes

The changes in configuration of the information system shall be monitored through configuration verification and audit processes.

e) Optimum Configuration

The information system shall be configured to provide only essential capabilities and specifically prohibits and /or restricts the use of the defined functions, ports, protocols, and/or services. A list of prohibited and/or restricted functions, port, protocols etc. shall be defined and listed. The information system shall be reviewed at defined frequency to identify and eliminate unnecessary functions, ports, protocols, and/or services.

f) Inventory of Information System Components

A current inventory of the component of the information system along with the ownership shall be developed, documented and maintained. The automatic mechanism / tools shall be employed to maintain an up-to-date, complete, reliable, accurate and readily available configuration of the information system

B. Configuration Management Tool

The configuration management of the entire system should be done using tools as required so that the process is streamlined, well documented which can be controlled and monitored. The configuration management tools should use template for provisioning the environment/platform including the security and network architecture.

4.8 Exit Management:

a) The exit management period starts, in case of expiry of contract, at least 6 months prior to the date when the contract comes to an end or in case of termination of contract, on the date when the notice of termination is sent to the Bidder. The exit management period ends on the date agreed upon by IOCL or Six months after the beginning of the exit management period, whichever is earlier.

b) The ownership of the data generated upon usage of the system, at any point of time during the contract or expiry or termination of the contract, shall rest absolutely with IOCL.

c) Confidential Information, Security and Data: Bidder will promptly, on the commencement of the exit management period, supply to IOCL and its nominated agencies the following:

i. The bidder shall ensure proper and satisfactory Transition is made to the other agency which is identified or selected for providing services related to RFP's scope of work,
ii. Information relating to the current services rendered and performance data relating to the performance of the services;
iii. Bidder to hand-over the entire design including source code, program files, configuration files, setup files, project documentation, etc.
iv. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable IOCL and its nominated agencies, or it's replacing Bidder to carry out due diligence in order to transition the provision of the Services to IOCL or its nominated agencies, or its replacing Bidder (as the case may be).
v. The Bidder shall retain all of the above information with them for 30 days after the termination of the contract, post which the provider has to wipe/purge/delete all information created or retained as part of this project.
vi. Bidder shall ensure that the CSP does not delete any data at the end of the contract (for a minimum of 45 days beyond the expiry of the contract) without the express approval of the IOCL. The cost for data retention beyond 45 days to be mentioned in the commercial quote.

d) If the CSP fails to meet the performance & SLA guidelines IOCL reserves the right to terminate the contract and request to move to a different CSP that meets the mandatory guidelines & standards at no additional cost to IOCL. The exit management provisions shall come into effect in such a scenario.

A. **Exit management plan**

Successful Bidder shall provide IOCL with a recommended comprehensive "exit management plan" which shall deal with at least the following aspects of exit management in relation to the SLA as a whole:

a) A detailed program of the transition process that could be used in conjunction with a Replacement Bidder including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer.
b) Plans for the communication with such of the Successful Bidder, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on Project's operations as a result of undertaking the transfer.
c) Carry out the migration of the VMs, data, content and any other assets to the new environment created by the IOCL or any other Agency (on behalf of IOCL) on alternate CSP's offerings to enable successful deployment and running of the IOCL solution on the new infrastructure.
d) Exit Management Plan shall be presented by the Bidder to IOCL and shall be approved by IOCL.
e) Bidder shall update the exit management plan on timely basis in accordance with IOCL.
f) During the exit management period, the Bidder shall use its best efforts to deliver the services.
g) The Exit Management Plan will be evaluated based on the below parameters. It must be

noted that an indicative set of parameters have been provided below, IOCL may change the evaluation parameters at any time during the contract.

i. The Bidder must provide comprehensive knowledge transfer to new operations team through workshops, discussions sessions and responses to queries.
ii. The Bidder must provide at least one month of shadow Operations and Maintenance Support services, where the new operations team and the Bidder's operations team are working in parallel.
iii. Bidder shall close all critical open issues as on date of exit. All other open issues as on date of Exit shall be listed and provided to IOCL.
iv. The Bidder must ensure that its team has handed over administration rights / passwords to the new operations team.
v. The Bidder must ensure complete handover of the cloud environment in a complete operational condition to the satisfaction of IOCL. In case the Bidder is unable to address such issues, IOCL may levy penalty or invoke the Performance Bank Guarantee of the Bidder.
vi. The Bidder shall ensure all documentation including diagrams, manuals, policies, procedures, asset registers, configuration documents, original licenses and all other documents in relation to the works are kept up to date and all such documentation is handed over to IOCL.
vii. In addition, any information/ data gathered or generated by the Bidder during the term of the Contract would be the property of IOCL and the same should be handed over to IOCL in native format at the end or termination of the Contract.
viii. In case if IOCL observes the lack of willingness to manage transit / sharing of information or lack of support from Bidder's end, IOCL shall have absolute discretion to levy severe penalties and deduct the amount from monthly billing or performance bank guarantee.
ix. During transition phase, the Successful Bidder shall not change or remove their key resources at any locations to enable the successful transition. In case of any such happening, IOCL will have right to penalize the Successful Bidder appropriately.
x. The transition period being within the contract period, the Bidder shall continue to be responsible for the in-scope activities under Operations and Maintenance support, unless otherwise specified by IOCL.

B. **Role and Responsibility**

a) IOCL intends to use cloud services provided by the bidder for a period of five years and bidder shall enter into a five-year contract agreement with IOCL. However, IOCL reserves the right to terminate the contract at any point of time by giving 3 months' notice.
b) Confidential Information, Security and Data: Bidder will promptly, on the commencement of the exit management period, supply to IOCL or its nominated agencies the following:
    i. Information relating to the current services rendered and performance data relating to the performance of the services.
    ii. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable IOCL and its nominated agencies, or it's replacing Bidder to carry out due diligence in order to transition the provision of the Services to IOCL or its nominated agencies, or its replacing Bidder (as the case may be).
c) The CSP shall be responsible for providing the tools for import / export of content and the

bidder shall be responsible for preparation of the Exit Management Plan and carrying out the exit management / transition

d) Bidder needs to ensure that database and data warehouse should allow export of all IOCL data, schema, and procedures (if any) and storage components should allow all data transfer to on-premise or to other CSP. Also, all application code, images and configurations should be allowed to be transferred to on-premise or to other CSP.
e) At the end of the contract period or during the contract period, if any other agency is identified or selected for providing services related to bidder's scope of work, the bidder shall be responsible to deliver services defined in scope and maintain SLA requirements.
f) All risk during transition stage shall be properly documented by bidder and mitigation measures are planned in advance so as to ensure smooth transition without any service disruption.
g) Bidder shall provide necessary handholding and transition support, which shall include but not limited to, conducting detailed walk-through of the solution, handing over the entire software (including source code, program files, configuration files, setup files, project documentation etc.), addressing the queries/clarifications of the new agency, conducting training sessions etc.
h) The transition plan along with period shall be mutually agreed between bidder and IOCL when the situation occurs. Bidder shall be released from the project once successful transition is done meeting the parameters defined for successful transition
i) Bidder to ensure that all Machine learning models used should be exportable from cloud. Models should be available for deployment to other clouds and on-premise as well.

The plan to be activated 6 months before the contract expiry or in case of termination immediately after the notice is being served.

5. COMMERCIAL TERMS AND CONDITIONS

5.1 Guarantees:

5.1.1 The bidder undertakes to indemnify/protect the Corporation against all claims, losses, costs, damages, expenses, action suites and other proceedings, resulting from infringement of any patent, trademark, copyright, etc. in respect of the project mentioned in the scope of work & its components including software supplied by them. The bidder will bear all costs in such cases.

5.1.2 The maximum liability shall be limited to 100% of the contract value except in case of fraud and/or wilful negligence. The vendor shall not be liable for consequential losses on account of production revenue or profit.

5.2 Acceptance by IndianOil:

5.2.1 An authorized officer of IOCL must certify & sign all the sign-off / project completion reports and the invoice(s) for the Bill of Material including any licenses (if any) being supplied.

5.3 Performance Bank Guarantee:

5.3.1 By way of Bank Guarantee, the vendor shall guarantee that any and all materials/services used in execution of the Purchase Order shall be in strict compliance with characteristics, requirements and specifications agreed upon as per scope of the work and tender terms and conditions and that the same shall be free from any defects.

5.3.2 The successful Bidder has to necessarily furnish Performance Bank Guarantee for 3% of the total Work Order value, valid for the period of 60 months plus 3 months i.e. sixty three months (63) from the commissioning/Go-Live date of the project.

5.3.3 It will be responsibility of the Vendor to keep the Bank Guarantee fully subscribed. Any shortfall in the value of the Bank Guarantee as a result of encashment by the Corporation either in full or in part in terms of the Performance Guarantee shall be made good by the Vendor within one week thereof. Such BG should be directly sent in a sealed envelope by the issuing Bank.

5.4 Verification of documents:

5.4.1 Technical qualification of the bidders shall be based on document / credentials submitted by bidder(s) in the tender. Document verification with originals shall be carried out after opening of price bids. Recommendation for award of contract shall be made only after verification of documents with originals of the shortlisted bidder(s). Since documents are submitted by the bidder(s) in the tender, the responsibility of authenticity of documents shall be with the bidder(s).

5.4.2 Shortlisted bidder(s) shall be required to present their original documents to the tender inviting authority within a period of 7 days from the date of intimation by IOCL. In case it is observed that if any bidder(s) submitted forged documents / credentials, necessary action for holiday listing of the bidder(s).

5.4.3 Bidders may note that no compensation will be paid by the IndianOil for reduction of Scope of Work or Quantities mentioned in Price Bid.

5.4.4 Any dispute or difference arising under or in connection with this contract shall be

referred to a Sole Arbitrator as per the provisions of the Indian Arbitration and Conciliation Act 1996 as amended from time to time.

5.4.5 Negotiations shall not be conducted with the bidders as a matter of routine. However, Corporation reserves the right to conduct negotiations. The bidder shall confirm the negotiations within the stipulated time. If the bidder fails to comply, IOCL reserves the right to reject his tender at their discretion. Bidders will have to attend the office of IOCL at Mumbai for negotiations / clarifications as required in respect of their quotation without any commitment/obligation from IOCL.

5.4.6 IOCL shall not be bound to accept lowest or any tender and reserve the right to accept one or more tenders in part. The decision of IOCL in this regard shall be the final.

5.4.7 Any conditional / incomplete offer or failure to follow above instructions shall lead to disqualification even at the time of opening of bids. Providing any details of rates offered in the technical commercial bid section will lead to disqualification of the bidder

5.4.8 As the evaluation of price bids of the technically qualified bidders will be done after considering the implication of input tax credit, if applicable, the comparative positions of the bidders will be arrived at manually and the auto generated comparative statement by the system will not be considered.

5.4.9 Repeat order upto the ordered quantity could be placed within six (6) months of placement of purchase order.

5.5 Price Schedule:

5.5.1 The GST& Other Levies is chargeable as applicable at the prevalent rates (refer Special Conditions of Contract – Taxes).

5.5.2 The bidder shall not omit items or leave any blanks against rate or price of any item. Blank or omitted items will be considered 'Nil' and treated as having Zero value.

5.6 In case of irreconcilable conflict in any matter between the provisions in separate contract documents concerning or governing the same aspect, precedence shall be given to the provisions contained in the documents mentioned below in the order in which they are set out below:

a. Formal contract
b. Minutes of Pre bid meeting / Corrigendum
c. Price bid including schedule of work/bill of quantity
d. Notice Inviting tender
e. Special terms and condition of the tender
f. Specifications & Drawings (if any) included in Technical Commercial Bid
g. General Terms & Conditions of the Tender

Any variation or amendment issued after the execution of the formal contract shall take precedence over the formal contract and all other Contract Documents.

5.7 Bid Security Declaration:

5.7.1 Bidders have to submit the 'Bid Security Declaration' as per **ANNEXURE-K**. Bid Security Declaration needs also to be submitted by MSEs as per PPP, CPSEs & JVs.

5.8 Security Deposit

5.8.1 The successful Tenderer shall within 30 days from the date of PO / Work Order/ LOA /

LOI have to make payment towards Security Deposit as detailed below.

5.8.2 Security Deposit amount shall be equivalent to 3% of the value of the PO/ Work order.

5.8.3 No claim shall be made to IndianOil in respect of interest on cash deposit or depreciation thereof. The IndianOil shall be entitled to deduct from the deposit any loss or damage which the IndianOil may be put to, by reason of any act or default recoverable by the IndianOil from the Vendor and to call upon the Vendor to maintain the deposit at the original limit by making further deposits.

5.8.4 Method of payment of the Security Deposit of the Vendor shall be either of as under. Pay Order or DD of Scheduled/Nationalized Banks **OR**

Bank Guarantee as an instrument towards Security Deposit shall be accepted. Bank Guarantee is to be executed by Nationalized / Scheduled Bank towards SD and should be valid for the period of completion of order plus 3 months. If needed, validity of BG should be extended by the party / Bank. Bankers should issue such BG with a covering letter addressed to IOCL directly in a sealed cover. The Performa of BG for Security Deposit is enclosed.

5.8.5 No interest will be paid on Security Deposit.

5.8.6 Option of one of above methods once exercised should under no circumstances be changed later on.

5.8.7 The refund of security deposit: The security deposit will be released after 3 months of successful completion of rollout period after producing original receipt.

5.8.8 Forfeiture of Security Deposit: All sums of compensation or other sums of money payable by the vendor may be deducted from Security Deposit. In the event of Security Deposit being reduced from the original quantum due to recoveries, the supplier shall within 15 days of recovery, make good the deficiency in Security Deposit by DD

5.8.9 IndianOil reserves the right to deduct from the SD, all sums of compensation or other sums of money payable by the vendor to IndianOil as given in tender clauses as applicable.

5.8.10 If requested by the Vendor, SD can be converted to PG provided the value of the PG is equal to or less than the value of the SD and if the SD was paid in DD / Pay Order and the party surrenders the original SD receipts along with the request.

5.9 Validity of Rates

5.9.1 The quoted rates shall be valid for a period of six months from the date of opening of Technical Bid till completion of contract in all respects. No escalation shall be entertained at any stage of the contract

5.9.2 Once the purchase order is placed and the same is accepted, the rates will be valid till the entire scope of the tender is executed in all respects. No escalation in the rates shall be provided during the currency of the contract.

5.10 Extension of Contract:

5.10.1 Period of contract shall be initial rollout period plus AMC period of 5 years. The IOCL and the Successful Bidder may mutually agree to extend the contract for another 2 years on year-to-year basis, with mutual consent at the same rates, terms and conditions, subject to satisfactory performance of the contractor.

5.10.2 IOCL may extend the whole contract or part thereof with mutual consent at the same rates, terms and conditions of present tender.

5.10.3 During the contract period any additional quantities (including additional transactions)

for cloud service will be at the same rate as per the initial contract. This clause may also be invoked if the cloud quantities defined in the tender are consumed before the end of contract period.

5.10.4 Decision to extend the contract shall be at sole discretion of IndianOil and Vendor shall not claim any rights for extension of contract.

5.11 Delivery Period

5.11.1 Supply of items/services mentioned in the BOM of the Purchase Order should be completed as per schedule mentioned in this tender document.

5.11.2 The time of completion of the delivery as stipulated in the delivery period shall be deemed to be the essence of the agreement. Any delay thereof shall be compensated suitably as given in this tender document.

5.11.3 IndianOil reserves the right to cancelling the Purchase Order for any delay exceeding the period of maximum compensation and the Vendor shall be liable to all consequences thereof. If the delay in delivery is due to Force Majeure the owner shall be free to act in terms under Force Majeure Clause as given in this tender. Acceptance of services beyond the scheduled delivery period will not be construed as condonation of delay.

5.12 DELAYED DELIVERY & INSTALLATION:

5.12.1 In case of delay in completion, the discount is to be passed on through invoice.

5.12.2 Vendor to note that if any penalties or price adjustments appear in different places in this document with different rates, the stricter of the rates will be applicable. In addition, any tax incidence on penalty shall also be recovered from the vendor.

5.12.3 The work must be completed within the respective due dates. If the Successful Bidder fails on the performance of the Agreement within the time fixed in the Agreement and does not complete the respective work on or before the due date, the contractual price payable shall be subject to adjustment for the delay period beyond the respective due dates as set out below. This will be in addition to and without prejudice to the other rights available to the IOCL.

5.12.4 Delay in deliveries may be attributed to poor project plans, inadequate teams, team attrition and any other reason attributable to the Successful Bidder(s) would be computed as per below – Price Reduction for Delay as mentioned in section 4.1. Bidder will have to pay to the Corporation by way of price reduction for Delay as a discount, subject to a maximum of 10 % of respective line item. Price reduction for delay as a discount in commissioning is to be given in the invoice/Credit Note.

Note - Sum of all Price Adjustment shall not exceed 10% of Contract value.

5.13 DEFICIENCIES IN QUALITY OR PERFORMANCE:

5.13.1 Any deficiency or deficiencies observed by IndianOil during the guarantee period or before, in the performance or quality of the goods supplied or services rendered can separately or collectively be subject to deduction of sums as compensation from the SD/PG/PBG amounts deposited with IndianOil to a value equivalent to deficiencies in quality or performance.

5.14 TERMS OF PAYMENT:

5.14.1 The selected bidder shall submit invoice and other documents necessary as per the terms duly authenticated by IndianOil official on each document to IndianOil's Head Office at

Mumbai. The Payment after deducting applicable TDS will be released by IndianOil's Head Office Mumbai. The bidder shall be responsible for extending the validity date and claim period of all IndianOil guarantees on account of any delay on the part of the bidder. IndianOil shall invoke the bank guarantee before expiry of validity if work is not completed and the guarantee is not extended, accordingly.

5.14.2 Initial Advance: No Advance payment will be made.

5.15 SCHEDULE OF PAYMENT:

5.15.1 Payment shall be made as per payment schedule defined under the scope of work
5.15.2 Payment will be made as per details given below:
5.15.3 Payment will be made only against receipt of the invoices(s).
5.15.4 The invoice submitted by the vendor should clearly mention all tax related components.
5.15.5 The selected bidder shall submit invoice and supporting documents at IOCL's Office where the material/service is supplied/delivered after which an authorised Officer of IOCL will duly authenticate each document and release payment.
5.15.6 No payment other than the rate / amount quoted in the tender would be paid by IOCL.
5.15.7 IOCL shall make payment after deducting any TDS as applicable as per prevailing taxation rules.
5.15.8 STANDARD TAXATION CONDITIONS as defined in the relevant section will be applicable.
5.15.9 Bidders should also provide their consent for receiving payments through electronic fund transfers from IOC.
5.15.10 Under any circumstances, the fee / payment towards any or all activities outlined above shall not exceed the total work order value.

5.16 PRICE SCHEDULE:

5.16.1 The sample price bid format is placed at Price bid format section below.
5.16.2 In the price schedule, Bidder must enter the basic rate exclusive of taxes and select IGST or CGST+SGST from drop down and provide applicable GST tax rate.
5.16.3 GST as applicable shall be paid at the prevalent rates at the time of invoice.
5.16.4 The bid shall be complete in all respects with the prices indicated item-wise.
5.16.5 In case the bidder has been asked to submit price bid/price implication in physical form, the use of white/erasing fluid for correcting the rates is banned. Wherever the rates are corrected with white/erasing fluid, the bids will be summarily rejected.

5.17 Subcontracts:

5.17.1 The Successful Bidder/Contractor shall not assign, sub-contract or sublet the whole or any part of the work in any manner, provided the bidder may with the prior written approval of the IOCL Engineer-in-Charge, sub-contract any particular work or part of the work to a sub-contractor approved by the IOCL's EIC.

5.18 Intellectual Property Rights:

5.18.1 The Intellectual Property Rights for the developed product should invariably reside with the IOCL. This should include the source code, release management artifacts and all other technical and domain related documentation for the developed solution.

The IPR for the developed product / solution should not be restricted / compromised through any legal interpretation. The solution should clearly be the property of the IOCL.

5.19 STANDARD TAXATION CONDITIONS (STC):

The following clauses are relevant for tenders for works contract under GST Law.

Clause No.	Description
	DEFINITIONS
1	Contractual period / Work Completion Period /Contractual Delivery Date / Contractual Completion Period shall mean the Scheduled Delivery / Completion Period as mentioned in the LOA (Letter of Acceptance) or Purchase Order or Work Order and shall also include approved extensions, if any.
	GENERAL
1	Where any portion of the GCC/any other section of tender, is repugnant to or at variance with any provision of the Standard Taxation Condition (STC), then the provision of the STC shall be deemed to override the provisions of the GCC and shall, to the extent of such repugnance or variations, prevail.
2	For the purpose of this STC, the term "tax" in addition to tax imposed under CGST (Central Tax)/SGST (State Tax)/IGST (Integrated Tax)/UTGST (Union Territory Tax)/ GST Compensation Cess Acts, also includes any duties, cess or statutory levies levied by central or state authorities.
3	Rate variation in Taxes and any new promulgated taxes after last date of the submission of price bid only on the final product and/or services (applicable to invoices raised on IOCL) within the contractual delivery date /period (including extension approved if any) shall be on IOCL's Account against submission of documentary evidence. Further, in case of delay in delivery of goods and/or services, any upward rate variation in Taxes and any new promulgated taxes imposed after the contractual delivery date shall be to the Seller's / Contractor's Account. Similarly in case of any reduction in the rate(s) of the Taxes between last date of submission of price bid relevant to the Contract and the date of execution of activities under the contract, the Contractor shall pass on the benefit of such reduction to IOCL with the view that IOCL shall pay reduced duty/Tax to Govt.
4	Wherever any escalation / de-escalation linked to raw material price (Basic price excluding taxes) is allowed as per terms of the contract, Variation to the extent related to escalation / de-escalation of value of material shall be allowed without Tax unless specified otherwise.

5	It would be the responsibility of the contractor to get the registration with the respective Tax authorities. Any taxes being charged by the Contractors would be claimed by issuing proper TAX Invoice indicating details /elements of all taxes charged and necessary requirements as prescribed under the respective tax laws and also to mention his correct and valid registration number(s) along with IOCL's registration number as applicable for particular supply on all invoices raised on IOCL. Contractor to provide the GSTIN number from where the supply is proposed to be undertaken. Further the HSN Code / Service Accounting Code (SAC) as applicable for the subject tender needs to be provided in the columns provided in the technical bid. In case the contractor is opting for Composition scheme under the GST laws (i.e Section 10 of the CGST Act, 2017 and similar provisions under the respective State / UT law), the contractor should confirm the same. Further the contractor to confirm the issuance of Bill of Supply while submission of tender documents and no GST will be charged on IOCL. In case the contractor is falling under Unregistered category, the contractor should confirm the same.
6	The contractor would be liable to reimburse or make good of any loss/claim by IOCL towards tax credit rejected /disallowed by any tax authorities due to non-deposit of taxes or non-updating of the data in GSTIN network or non-filling of returns or noncompliance of tax laws by the Contractor by issuance of suitable credit note to IOCL. In case, contractor does not issue credit note to IOCL, IOCL would be constrained to recover the amount including interest payable along with Statutory levy/Tax, if any, payable on such recovery.
7	Tax element on any Debit Note / Supplementary invoice, raised by the contractor will be reimbursed by IOCL as long as the same is within the permissible time limit as per the respective taxation laws and also permissible under the Contract terms and conditions. Contractors to ensure that such debit Notes are uploaded while filing the Statutory returns as may be prescribed from time to time.
8	The contractor will be under obligation for quoting/charging correct rate of tax as prescribed under the respective Tax Laws. Further the Contractor shall avail and pass on benefits of all exemptions/concessions/benefits/waiver or any other benefits of similar nature or kind available under the Tax Laws. In no case, differential Tax Claims due to wrong classification of goods and/or services or understanding of law or rules or regulations or any other reasons of similar nature shall be entertained by IOCL.
9	In case, IOCL's Input Tax Credit (ITC) is rejected on account of wrong levy of tax i.e., payment of Integrated Tax in place of Central Tax+ State/Union Territory Tax or vice versa, the contractor is liable to make good the loss suffered by IOCL by issuance of suitable credit note to IOCL. In case, contractor does not issue credit note to IOCL, IOCL would be constrained to recover the amount including interest payable along with Statutory levy, if any, payable on such recovery.
10	In case the contractor is opting for Composition scheme under the GST laws, in such event the evaluation of his bid will be based on the Quoted Price. In case the contractor is falling under Unregistered category, then GST liability, if any, on IOCL will be included for the purpose of evaluation.
11	In case, IOCL is eligible to avail Input TAX Credit (ITC), the same shall be reduced from the delivered price to arrive at the net landed cost.
12	IOCL shall reimburse GST levied as per invoice issued by the Contractor as prescribed under section 31 of the CGST Act and respective states and Rules.

13	To enable IOCL to avail ITC, the contractor/supplier shall furnish/submit any and all certificates, documents and declarations as are required by IOCL to avail of the ITC with respect to GST reimbursed by IOCL on materials sold to IOCL.
14	Invoice should be raised as per Tax Rates mentioned in the BIDs and in case at the time of raising Invoice if the invoices raised are not as per Tax rates mentioned in the bid, payment will be limited to the rate quoted as per BID subject to increase /decrease in Rates after last date of submission of Price Bid provided delivery is within the Contractual period.
15	CUSTOM DUTY (These clauses will not be applicable wherever port clearances are in the scope of IOC and IOC is to take delivery at Port) applicable for Global Tender
15.1	Custom Duty for this clause shall mean Basic Custom Duty, Additional Duty of Customs levied under Section 3 of the Customs Tariff Act equivalent to the IGST and Education Cess and Secondary and Higher Secondary Cess.
15.2	The contractor shall within 7 (seven) days of dispatch /shipment of any such materials forward to the owner, the following documents. (i) Supplier's /Vendor Invoice indicating item wise price of the materials for the purpose of assessing customs and other Import duties (ii) Bill of lading/Airway Bill (iii) Package wise packing list (iv) Certificate of origin and other relevant documents relating to the identification of the materials. (v) Other relevant documents for the assessment of customs duties and the clearance of goods through Customs.
15.3	The Contractor shall also be fully responsible for Port and Customs clearance including stevedoring, handling, unloading, loading and storage and for satisfying all Port and Customs formalities for the clearance of the goods, including preparation of the BILL(s) of Entry mentioning the applicable GSTIN of IOCL and other documents required for import and or/clearance of the goods. The applicable GSTIN shall be advised by IOCL. The Contractor shall also be fully responsible for any delays, penalties, interest, demurrages, shortages and any other charges and losses, if any in this regard.
15.4	The Custom Duty payable shall be reimbursed on production of supporting documents or paid directly to the Customs Authority, as the case may be.
15.5	IOCL shall pay the CUSTOM DUTY within 1 (one) working day or specified under Customs law, after the day on which the CONTRACTOR furnishes the complete necessary documents including duty requisition slip along with BILL of ENTRY to the IOCL's designated office for release of requisite materials/ equipment from Customs. However additional cost on account of delayed payment of Custom duty due to IOCL' s fault shall be paid by IOCL.
15.6	IOCL will not bear liability towards payment of safeguard duty, Anti-Dumping duty, Protective Duty or Countervailing Duty on subsidized articles or any other such duties of Customs imposed by the Government of India under Custom Tariff Act 1975 applicable on such materials in India.
15.7	All other costs towards Port and Customs Clearance shall be the contractor's responsibility including appointment and payment to clearing agents and no reimbursement will be made by IOCL except as quoted in the price bid.

15.8	The contractor shall provide IOCL with all documents necessary for IOCL to claim Input Tax Credit (ITC) of the IGST levied under Section 3 of the Custom Tariff Act. Should the contractor fail to provide any such document(s) resulting in a shortfall in the ITC available to IOCL, the shortfall shall be made good by the contractor by issuance of suitable credit note to IOCL. In case the contractor does not issue credit note to IOCL, in such case, IOCL would be constrained to recover the amount along with interest and statutory levy, if any, and such recovery would be without pre-judice to any other mode of recovery from the Running Account or other bills or payments to the Contractor.
15.9	The input tax credit available to IOCL will be reduced to arrive at the net Landed cost in the hand of IOCL for evaluating the Bids.
15.10	In case the bidder is availing any exemption under the prevailing customs law, then necessary documentary proof for availing the said exemption is required to be submitted. In the event of non-submission of the requisite documents as per the conditions for availing the exemption by the successful bidder, then the additional outflow on account of various taxes and duties will be recovered from the bidder.
15.11	The Tariff Head under which the goods will fall should be clearly mentioned along with the Custom Duty Rate at the time of submission of Bid.
16	ROAD PERMIT /WAYBILL
16.1	IOCL will issue Road Permit/Waybill, by whatever name it is called, to the Contractor only in those cases where materials is purchased by IOCL directly and/or IOC is statutorily required to issue the Road permit/Way Bill, by whatever name it is called. Contractor will be under obligation for proper utilization of road permits for the specific supply and in case of seizure of goods/vehicle; the Contractor will be wholly responsible for release and reimburse the litigation cost to IOCL.
16.2	IOCL shall on no account be responsible for delay or hold up due to the timely non availability of such documents as are required to be furnished by the owner to obtain the Road Permit/Waybill, by whatever name it is called. However, IOCL shall make best efforts to provide sufficient number of Road Permits/waybill, by whatever name it is called. on demand to avoid any delay or hold up.
17	Works Contract / Composite Supply / Mixed Supply
17.1	Works contracts as defined under the GST law includes Contracts for Building, Construction, Fabrication, Completion, Erection, Installation, fitting out, Improvement, Modification, Repair, Maintenance, Renovation, Alteration or Commissioning of any immovable property wherein transfer of goods is involved in the execution of such contracts. Composite Supply has been defined as supply in which two or more supply of goods or service or both or any combination are naturally bundled and supplied in conjunction with each other in the ordinary course of Business, and then the rate as applicable for principal supply will be applicable on the entire transaction. Mixed supply has been defined as supplies of goods or service or both which are made in conjunction with each other for a single price and which does not constitute a composite supply then the rate as applicable for the highest rate will be applicable. In view of the above various definitions under GST law, bidders are required to evaluate the jobs to be undertaken covered under the tender and quote accordingly by taking in to account the nature of Job read with the legal provision.
17.2	The place of supply in relation to an immovable property shall be the location at which the immovable property is located or intended to be located. Hence the bidders have to seek registration at the locations where the work is intended to be carried out.

17.3	In case, IOCL is eligible to avail Input TAX Credit (ITC), the same shall be reduced from the delivered price to arrive at the net landed cost. IOCL shall reimburse GST levied as per TAX invoice issued by the Contractor as prescribed under respective GST Acts and Rules. In case the contractor is not permitted to issue Tax Invoice the same should be clearly mentioned in the price Bid.
17.4	To enable IOCL to avail ITC, the contractor/supplier shall furnish/submit any and all certificates, documents and declarations as are required by IOCL to avail of the ITC with respect to VAT reimbursed by IOCL on materials sold to IOCL
17.5	Invoice should be raised as per Tax Rates mentioned in the BIDs and in case at the time of raising Invoice if the invoices raised are not as per Tax rates mentioned in the bid, payment will be limited to the rate quoted as per BID subject to increase /decrease in Rates after last date of submission of Price Bid provided delivery is within the Contractual period.
18	INCOME TAX
18.1	Resident Bidders: a) The contractor shall be exclusively responsible and liable to pay Taxes on Income arising out of payment made out of the contract. b) Wherever withholding tax i.e., Tax deduction at source (TDS) is applicable under the Income tax Act, 1961 the same will be deducted from the Invoices raised and TDS Certificate as per provision of the Income tax Act and Rules shall be issued to the contractor. c) PAN is mandatory. If PAN is not provided TDS would be deducted at higher rate as per the provisions of Income Tax Act. Non-Resident Bidder: a) Notwithstanding anything mentioned in the contract, Letter of Acceptance, BID Documents or any correspondences, following clauses shall be applicable with respect to Indian Income Tax including withholding tax. b) The CONTRACTOR shall be exclusively responsible and liable to pay all income taxes on any payments arising out of the Contract, whether payable in India or outside India. c) Any payment to non-resident or its permanent establishment (PE) in India which is chargeable to tax in India attracts withholding tax in India under Income Tax Act, 1961 shall be subject to provisions of Double Taxation Avoidance Agreement (DTAA) wherever applicable, for withholding tax purposes only. d) Contractor shall not include withholding tax / tax deductible at source in its quoted price. Withholding tax as applicable as per Indian Income Tax Act read with respective Double Taxation Avoidance Agreements (DTAA) will be borne by IOCL. e) Notwithstanding Clause “3” above, where Contractor intends to obtain a Certificate of Lower or NIL Withholding Tax/Tax deductible at source in terms of provisions of Indian Income Tax Act, 1961 and rules made thereunder, withholding tax/Tax deductible at source will be deducted from amount payable under the contract as per Certificate issued by tax authorities under Income Tax Act, 1961 and rules made thereunder. f) In all cases whether Withholding tax/Tax deductible at source is borne by IOCL as described in Clause “4" above or deducted from amount payable as per contract as described in Clause “5" above, Certificate of Withholding tax/Tax deducted at source will be provided by IOCL enabling contractor to claim credit of the same in their country of residence. g) To facilitate benefits of DTAA, Contractor shall provide copy of: (i) Tax Residence Certificate (TRC),

	(ii) Form 10F as described in Rule 21AB of Income Tax Rules, 1962, (iii) NO PERMANENT ESTABLISHMENT CERTIFICATE (NO PE) as may be required, (iv) Permanent Account Number (PAN), if available or (v) Declaration in lieu of PAN as per Rule 37BC of Income Tax Rules, 1962. (vi) Any other document(s) which might be required to enable IOCL to apply Lower OR NIL rate of withholding tax.
18.2	Wherever provisions of Tax deduction at Source (TDS) are applicable under the CGST / SGST / UTGST/IGST Act ,2017 on supplies of goods or services or both to IOCL, tax will be deducted from the invoice raised and deposited with the authorities by IOCL. TDS certificate as per provisions of CGST / SGST / UTGST/IGST Act, 2017 shall be issued by IOCL.

INCOME TAX:

A. The contractor shall be exclusively responsible and liable to pay Taxes on Income arising out of payment made out of the contract.

B. Wherever withholding tax i.e., Tax deduction at source (TDS) is applicable under the Income tax Act, 1961 the same will be deducted from the Invoices raised and TDS Certificate as per provision of the Income tax Act and Rules shall be issued to the contractor.

C. PAN is mandatory. If PAN is not provided TDS would be deducted at higher rate as per the provisions of Income Tax Act.

5.20 CONFIRMATION OF ORDER:

5.20.1 The successful bidder shall acknowledge the receipt of the PO within 21 days from the date of PO and shall there by confirm their acceptance of the PO in its entirety without exceptions by returning duplicate copy of PO duly signed and stamped in token of their acceptance. The acceptance of PO must be accompanied with requisite Security Deposit by the successful bidder.

5.21 COMPLETE AGREEMENT:

5.21.1 The terms and conditions of the tender along with PO shall constitute the entire agreement between the parties hereto. Changes will be binding only if the amendments are made in writing and signed by an authorized representative of the Owner and the Vendor. The zero date shall commence on the 7th (seventh) day of PO or the date of acceptance, whichever is earlier. Purchase agreement needs to be executed upon issuance of PO.

5.22 AUTHORIZED SIGNATORY:

The selected bidder shall indicate the authorized signatories who can discuss and correspond with IndianOil, with regard to the obligations under the Contract. The selected bidder shall submit at the time of signing the contract, a certified copy of the resolution of their Board, authenticated by Company Secretary / proprietor, authorizing an official or officials of the company to discuss, sign agreements/contracts with IndianOil, raise invoice and accept payments and also to correspond. The bidder shall furnish proof of signature identification for above purposes as required by IndianOil.

5.23 COMPLETION TIME:

The services must be delivered as per schedule mentioned in this tender document.

5.24 PRICE:

The price shall be quoted by the Bidder in the specified Price-bid format in the e-Tender portal only. Failing to upload / submit the price in the format in the e-Tender site may lead to invalid bid. The Corporation, at its sole discretion, may negotiate further. The price as finally agreed between the Vendor and the Corporation shall be final and it shall not be subject to escalation for any reason whatsoever. No other costs are admissible beyond the price quoted in the price schedule. The price quoted in the price bid is considered as the maximum payment limit for the services as per the scope described in this schedule.

5.25 PRICE ADJUSTMENT FOR DELAY IN COMPLETION:

5.25.1 The contractual price payable shall be subject to adjustment by way of Discount or by way of Price Adjustment for the delay period beyond the due date.

5.25.2 The entire work must be completed within the stipulated time of completion. If the contractor fails on the performance of the contract within the time fixed in the contract & does not complete the entire work on or before the due date, the IndianOil shall be entitled to recover, and the Vendor agrees to pay to IndianOil as and by way of Compensation Price Adjustment as per the clause mentioned in this tender document up to an amount not exceeding 10% of the work order value for the delay period beyond the due date. This will be in addition to and

5.25.3 without prejudice to the other rights available to the Corporation under the said works contract and the general conditions of the works contract.

5.25.4 The discount is to be passed on through invoice.

5.26 FORCE MAJEURE:

5.26.1 If any time during the term of work order the performance in whole or in part by either party of any obligation under the work order is prevented or delayed by reason of strike, lockout, war (whether declared or not), revolution, riot, act of public enemy, terrorism, explosions, sabotage, epidemics, quarantine restrictions, pandemic, accident, fire, flood, tempest, earthquake, civil commotion, government action, police action, action of municipalities, acts of god or other causes, which are entirely beyond the reasonably control of the party (referred to as Force Majeure events), provided notice of the happening of any such force majeure events is given by the affected party to the other within 14 days from the date of occurrence thereof at the specified addresses, the other party shall not be entitled to any claim for damages against the party giving such notice in respect of such non-performance or delay in performance due to the force majeure events.

5.26.2 Should one or both the parties be prevented from fulfilling the contractual obligations by a state of Force Majeure, lasting continuously for a period of six months, the parties shall consult each other regarding the future implementation of the contract.

5.26.3 The mere shortage of labour, materials or utilities shall not constitute Force Majeure, unless caused by circumstances, which are themselves Force Majeure.

5.26.4 The party claiming the existence of Force Majeure will continue to perform its obligations under the contract as far as is reasonably practicable and shall seek all reasonable alternative means of performance not prevented by the Force Majeure event.

5.26.5 No ground for exemption can be invoked, if the party claiming the existence of Force

Majeure has failed to give timely notice and subsequently support it by documentary evidence.

5.27 ARBITRATION:

5.27.1 Conciliation Rules: Not withstanding any other dispute resolution provided under the Tender document, with a view to a speedy resolution, the Contractor & Owner may at any time endeavour to settle through Conciliation a dispute referable for settlement by Conciliation under & in accordance with the Indian Oil Corporation Limited Conciliation Rules, 2014 (hereinafter called as "said Rules") as amended from time to time. The said rules may be downloaded from the Owner's website www.iocl.com & if not available a copy thereof may be obtained from the Owner on written request.

5.27.2 Any dispute or difference arising under or in connection with this contract shall be referred to a Sole Arbitrator as per the provisions of the Indian Arbitration and Conciliation Act 1996 as amended vide Arbitration and Conciliation (Amendment Act), 2021 dated 11-03-2021.

5.27.3 If any dispute or difference of any kind whatsoever shall arise between the Parties in connection with or arising out of this Agreement, such dispute or difference shall be resolved through arbitration as per the procedure mentioned herein below:

5.27.4 The dispute or difference shall be referred to a sole arbitrator.

5.27.5 The arbitration shall be through Indian Council of Arbitration, Mumbai.

5.27.6 The Rules of the above-mentioned Institutional Arbitration Forum shall be applicable to the arbitral proceedings.

5.27.7 The Indian Arbitration and Conciliation Act 1996 as amended vide Arbitration and Conciliation (Amendment Act), 2021 dated 11-03-2021 or any statutory modification or re-enactment thereof and the rules made there under for the time being in force shall apply to the arbitration proceedings under this clause.

5.27.8 The seat of arbitration shall be at Mumbai.

5.27.9 The proceedings shall be conducted in English language.

5.27.10 The cost of the proceedings shall be equally borne by the parties, unless otherwise directed by the sole arbitrator.

5.27.11 Notwithstanding anything contained herein above (except 'h'), upon arising of dispute the parties may agree to refer the same to arbitration of mutually acceptable sole arbitrator including employee of Indian Oil Corporation Ltd.

5.28 LIMITATION OF LIABILITY And INDEMNIFICATION:

Please refer Master Service Agreement – Section 1.14 Indemnification & Limitation of Liability

5.29 APPLICABLE LAW & JURISDICTION OF COURT:

Please refer Master Service Agreement – Section 1.29 Applicable Law and Dispute Resolution

5.30 CANCELLATION OF THE CONTRACT & COMPENSATION:

Please refer Master Service Agreement – Section 1.13 Termination

5.31 NOTICES:

5.31.1 Notice or other communications given or required to be given under the Contract shall be in writing and shall be hand-delivered with acknowledgement thereof, or transmitted by pre-paid registered post or by recognised courier, or by facsimile, provided that where such notice is sent by facsimile, a confirmation copy shall be sent by pre-paid registered post or by recognised courier within five days of the transmission by facsimile, to the address of the receiving party by the other in writing, provided any change of address has been notified at least ten days prior to the date on which such notice has been given under the terms of the contract.

5.31.2 Any notice or other communications shall be deemed to have validly given on date of delivery if hand-delivered; if sent by registered post or by recognized courier, then on the expiration of seven days from the date of posting; and if transmitted by facsimile, then on the next business date after the date of transmission.

5.32 OTHER POINTS:

Vendor shall strictly as per enclosed Proforma only, furnish Bank Guarantees for Security Deposit / Performance Guarantee, Indemnity bonds and other Declarations.

5.33 STATUTORY RULES & REGULATIONS

The tenderer will abide by the Rules, Regulations, Byelaws and Statutes, etc. imposed by the Government / Semi Government and other local governing bodies for execution of this job, including obtaining of licenses, permits etc., if any and the expenses incurred towards this has to be borne by the tenderer.

5.34 USE OF CONTRACT DOCUMENTS, SPECIFICATIONS, DESIGN

5.34.1 The tenderer shall not, without IOCL's prior written consent, disclose the contract or any provision thereof or any data, findings etc. or information furnished by or on behalf of IOCL in connection or to any person other than a person employed by the tenderer in the performance of the purchase order. Disclosure to any such employed person shall be made in confidence and shall extend only so as may be necessary for the purpose of such performance. The tenderer will bind such employee to secrecy of information.

5.34.2 The tenderer shall not without IOCL's prior written consent make use of any document or information set out above or in this purchase order except for the purpose of performing the purchase order.

5.35 LABOUR LAWS

5.35.1 The tenderer shall ensure compliance of all labour laws which are applicable to their workmen and to those engaged by them (in particular the various provisions of contract labour (Regulation and Abolition) Act 1970 and Minimum wages Act 1948) to whom any part of the contract envisaged under this agreement is entrusted.

5.35.2 The tenderer shall be responsible for all statutory obligations and any other laws in above regard in force from time to time regarding employment or condition of service of tenderer’s workmen or employees.

5.35.3 The tenderer shall ensure compliance of all safety rules as required under various statutes in India and shall strictly adhere to safety regulations of the IOCL.

5.36 PATENTS

5.36.1 The tenderer shall, subject to the limitations contained in this article, at all times

indemnify and hold IOCL harmless from all costs, damages and expenses arising out of any claim, action or suit brought against IOCL in respect of any infringement of any patent or registered design or any similar rights resulting from the use of any technical information, data or process or design belonging to tenderer and / or furnished to IOCL and utilized by the tenderer in the Project. IOCL shall promptly notify tenderer in writing of any such claim preferred or any suit or action filed or brought against IOCL by any person for such infringement of any patent or registered design or any such similar right held by third parties. Tenderer shall take such legal action as may be necessary for defending the same and legal expenses that may be incurred including Professional charges shall be paid and fully borne by the tenderer only.

5.37 WAIVER

5.37.1 Any acquiescence or waiver by IOCL of any delay, breach or default committed by the vendor shall not be deemed to be or considered as to appeal against IOCL nor prevent IOCL from exercising any of its rights under any of the provisions under this contract.

5.38 ASSIGNMENTS

5.38.1 This agreement shall not be assignable by the vendor without written consent of the IOCL. The Seller shall not sub-let or assign this contract or any part thereof without the written permission of the Purchaser. In the event of the Seller's sub-letting or assigning this contract or any part thereof without such permission the Purchaser shall be entitled to cancel the contract and to purchase the equipment/ material elsewhere on the Sellers's account and risk and the Seller shall be liable for any loss or damage which the Purchaser may sustain in consequence of or arising out of such purchase.

5.39 DESIGN, SPECIFICATIONS AND PATTERNS:

5.39.1 When tenders are called for in accordance with design, specification or sealed pattern the Seller's tenders to supply in accordance with such design, specification or sealed pattern shall be deemed to be an admission on his part that he has fully acquainted himself with the details thereof and in no circumstances will any claim on his part which may arise on account of his insufficient examination of the said design, specification or sealed pattern, be considered.

5.40 CHARGES FOR WORK NECESSARY FOR COMPLETION OF CONTRACT

5.40.1 The Seller shall pay all charges for handling, stamping, painting, marking, protecting or preserving patent rights, design, pamphlets, models and gauges and for all such measures as the Purchaser may deem necessary for the proper completion of the contract, through special provision therefore may not be made in specification.

5.40.2 IOCL shall not incur any charges towards scope of work other beyond the price schedule submitted.

5.41 SELLER'S RESPONSIBILITY:

5.41.1 The Seller is to be entirely responsible for the execution of the contract in all respects in accordance with the terms and conditions as specified in the acceptance of Tender and the Schedule annexed thereto. Any approval which the Purchaser or his authorized representative may have given in respect of the supply of said items or other particulars and the work or the workmanship involved in the contract (whether with or without test carried out by the Seller or the Purchaser's representative) or acceptance by the

Purchaser's representative it shall be lawful for the Consignee on behalf of the Purchaser to reject if it is found that the material / services supplied by the Sellers are not in conformity with the terms and conditions of the Contract in all respect.

5.42 CLAIMS:

5.42.1 The Purchaser shall be entitled to retain the amount of any claim of the Purchaser against the Seller whether liquidated or unliquidated arising out of the Contract under reference, or otherwise however, and set off the same against amount payable to the Seller under reference or otherwise however without prejudice and in addition to the other rights of the Purchaser to recover the amount of any claim as aforesaid.

5.43 ILLEGAL GRATIFICATION:

5.43.1 Any bribe, commission, gift or advantage given, promised or offered by the Seller or by anybody on his behalf, to the Purchaser or any person on his behalf either friend or relative, in relation to obtaining or execution of this particular or any other contract/s with Purchaser for showing favour or disfavour to any person in relation to this particular or any other contract/s as aforesaid shall subject the seller to the cancellation of the particular and/or any other or all contracts entered into with them by the Purchaser and also to payment of any loss or damage resulting from any such cancellation to the like extent provided in the Agreement.

5.44 LAW GOVERNING THE CONTRACT:

This contract shall be governed by the Law of India from time to time in force.

5.45 CONSORTIUM:

Consortium is not allowed to bid.

5.46 INTEGRITY PACT

Tenderer shall sign and submit along with the technical bid in all respects the enclosed Integrity Agreement, which is an integral part of tender documents, failing which the tenderer will stand disqualified from the tendering process.

5.47 NON-DISCLOSURE AGREEMENT:

5.47.1 Successful bidder (s) has to sign Non-Disclosure Agreement with INDIANOIL and would be required to keep all information provided to them as "Confidential" and not disclose to any party without obtaining prior approval from INDIANOIL even after expiry of the contract. Successful bidder (s) has to sign the Non-Disclosure Agreement (NDA) (**as given in Annexure-**) before starting of the Assignment. If any bidder (s) disagrees to sign Non-Disclosure Agreement their offer will be rejected.

5.47.2 After the expiry of SERVICE period / closure of Contract, Vendor should submit a non-Disclosure undertaking for not divulging the specific document details as advised by and marked by IOCL. In case of a demand by an authorized statutory / Legal / Govt. institution to the vendor about sharing some information covered under Confidentiality clause / non-Disclosure undertaking, Vendor shall seek IOCL's permission / views regarding the same and shall be guided accordingly.

5.48 CORRESPONDENCE ADDRESS:

All correspondence in the execution of orders placed by IndianOil against this tender

shall be addressed to:

Information systems Department,
Marketing Head Office
Indian Oil Corporation Limited G-9, Ali Yavar Jung Marg
Bandra (East), Mumbai – 400051

5.49 BILL OF MATERIAL (BOM)/ PRICE BID FORMAT

Specimen Copy of the Price Bid is given in the following few pages. These pages are given only for information. ANY ENTRY OF ANY SORT INDICATING RATE, PRICE OR AMOUNT in the SPECIMEN COPY OF THE PRICE BID will DISQUALIFY this "Technical & Commercial Bid."

The following is the Format of the PRICE BID and contains the Bill of Material (BoM).

Validate | Print | Help

Item Rate BoQ

Tender Inviting Authority:

Name of Work:

Contract No:

Name of the Bidder/ Bidding Firm / Company	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER	NUMBER	TEXT	NUMBER	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity (million txns in 60 months)	Units	BASIC RATE In Figures To be entered by the Bidder	GST in %	GST in INR	Type of GST	HSC/SAC Code	TOTAL AMOUNT	TOTAL AMOUNT	TOTAL AMOUNT In Words
1	2	4	5	13	14	15	18	20	53	54	55
1	**Cloud Services Charges**										
1.01	IRAS - API & Portal: 1st Slab (After Go-live) (Upto 800 Million Transaction per month)	48000	Per Million		18	0.00	Selet		0.00	0.00	INR Zero Only
1.02	IRAS - API & Portal: 2nd Slab (After Go-live) (From 800 Million to 2000 Million Transaction per month)	72000	Per Million		18	0.00	Selet		0.00	0.00	INR Zero Only
1.03	ICPAS - API & Portal: (After Go-live)	6000	Per Million		18	0.00	Selet		0.00	0.00	INR Zero Only
1.04	Additional Data Integration with external endpoints (For both consumer and provider of service) (In addition to external integrations specified in scope of work)	120000	Per Million		18	0.00	Selet		0.00	0.00	INR Zero Only
1.05	IRAS: Design, Development UAT Services- One time Charge	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
1.06	ICPAS: Design, Development UAT Services- One time Charge	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
2	**OEM Professional Services cost**										
2.01	Cloud Services-OEM/CSP Professional Services	50	ManDays		18	0.00	Selet		0.00	0.00	INR Zero Only
3	**System Integrator Charges- Installation, Commissioning, Development, Configuration, Testing and Implementation cost**										

3.01	Blueprinting, Development, Configuration, Testing and Implementation - including custom development of APIs,Web/App portal, processes, reporting, serverless and responsive portal for IRAS as per the scope.	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
3.02	Blueprinting, Development, Configuration, Testing and Implementation - including custom development of APIs, Web/App portal, processes,reporting serverless and responsive portal for ICPAS as per the scope.	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
4	**Operational Support and Maintenance Cost**										
4.01	Support And AMC Cost -1st Year	12	Months		18	0.00	Selet		0.00	0.00	INR Zero Only
4.02	Support And AMC Cost - 2nd Yr to 5th Yr	48	Months		18	0.00	Selet		0.00	0.00	INR Zero Only
4.03	Cost for Additional man-hour for development efforts: For Change Request- **Project Manager**	50	ManDays		18	0.00	Selet		0.00	0.00	INR Zero Only
4.04	Cost for Additional man-hour for development efforts: For Change request- **Project Lead/Solution Architect**	100	ManDays		18	0.00	Selet		0.00	0.00	INR Zero Only
4.05	Cost for Additional man-hour for development efforts: For Change request- **Functional Developer / Tester /BA**	100	ManDays		18	0.00	Selet		0.00	0.00	INR Zero Only
4.06	Cost for Additional man-hour for development efforts: For Change request- **Technical Developer / Tester**	100	ManDays		18	0.00	Selet		0.00	0.00	INR Zero Only
4.07	Tools and Solution Management	60	Months		18	0.00	Selet		0.00	0.00	INR Zero Only
5	**Cloud Termination and Solution Migration cost**										
5.01	Cloud Termination & Exit Charges	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
5.02	Solution Migration Charges from one CSP to another CSP	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
5.03	Data retention charges beyond 45 days	30	Day		18	0.00	Selet		0.00	0.00	INR Zero Only
6	**Other Cost**										
6.01	VAPT and Audit Charges of whole Solution	10	No.		18	0.00	Selet		0.00	0.00	INR Zero Only
6.02	Training For IOCL	1	LS		18	0.00	Selet		0.00	0.00	INR Zero Only
Total in Figures									0.00	0.00	INR Zero Only
Quoted Rate in Words											INR Zero Only

IMPORTANT GUIDELINES TO TENDERERS

1) Bidders are requested to carefully study all the documents / annexures and understand the conditions, specifications etc. before quoting their rates. Offers should strictly be in accordance with the tender terms & conditions and our specifications. Indian Oil reserves the right to cancel the tender without assigning any reason.

2) Bidders are requested to go through the "Special Instruction to the Bidders (SITB)" provided in the IOCL E-Tendering site https://iocletenders.nic.in before participating in the e-Tender.

3) It is mandatory for every tenderer to provide all the information as set out in the tender document irrespective of their earlier association with IOCL. Any conditional / incomplete offer or failure to follow above instructions may lead to disqualification.

4) The Bidders shall upload legible scanned copy of necessary documents in support of required qualification and experience along with their offer as per instruction given in the Special Instructions to Bidders.

5) Physical/ Manual Bids shall not be accepted. Bids shall be accepted only though E-Tendering portal. No manual bid shall be permitted along with electronic bids. In case of receipt of manual bids apart from specifically requested offline documents in the tender, same shall be returned to the bidder. Additional documents received through email shall also be ignored for the purpose of evaluation, unless specifically advised by the Tender Issuing Authority.

6) It shall be understood that every endeavour has been made to avoid errors which can materially affect the basis of the tender and the successful bidder shall take upon himself and provide for risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.

7) Tenderers are advised not to send or upload un-necessary / unsolicited documents. The same will not be evaluated.

8) Bids should be submitted as under:
   Part–I: Technical Bid complete with all technical and commercial details and documents other than price shall be submitted essentially containing the documents in 'List of documents to be uploaded by the Bidder"

   Part-II: "Price Bid "This part shall have only Price Schedule (BOQ) with prices duly filled in. Prices shall be filled in the price bid format (excel sheet) provided with the tender documents (i.e., uploaded on the website by IOCL).

9) Tenders to note that price must be quoted only in the price schedule (BOQ) document. Disclosure of any price or rate in any manner other than in the price bid will lead to disqualification of the bid.

10) Notwithstanding the subdivisions of the tender document into several sections and volumes, every part of each shall be deemed to be supplementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.

11) Clarifications with respect to tender shall be obtained from IOCL.

12) Canvassing of information or submission of forged or false documents / information by any bidder shall make their offer invalid.

INSTRUCTIONS TO TENDERER AND PARTICULAR CONDITIONS OF CONTRACT

1.0 STUDY OF TENDER DOCUMENTS.

1.1 Tenderer should study the tender documents carefully and understand the contract conditions, drawings, specification, etc. before quoting.

1.2 If there are any doubts, they should get clarifications before the due date, but this shall not be a justification for late submission of the tender or extension of opening date.

1.3 The tender bids should strictly be in accordance with our specification, terms and conditions.

1.4 **PRE-BID CONFERENCE:** Pre-Bid Conference will be held as per the details given in NIT. The tenderers shall send their representatives with authorization to sign the minutes of Pre-Bid Conference and they shall be in a position to take decision on Techno-Commercial terms. Tenderers may please note that IOCL may not give any time for the tenderers to take decisions later on. During the pre-bid conference, IOCL shall clarify issues and answer questions on any matter that may be raised by the bidder. However, the bidders are requested to forward consolidated list of exceptions/clarifications/deviations (if any) to IOCL in soft copy (in the format given below) clearly specifying the tender clause no., page no., subject and the query/clarification sought latest by two days prior to the pre-bid Conference.

Sl.	Ref of Page No.	Tender Document		Subject	Deviation/ Exception / Clarification / Assumption
		Cl. No.	Para No.		
(1)	(2)	(3)	(4)	(5)	(6)

Any modification of the tender documents, which may become necessary as a result of the pre-bid meeting, shall be sent to all bidders through issuance of an Addendum/ Minutes of Meeting. The same shall be uploaded in website. All costs towards attending any meeting shall be at Tenderer's own expenses.

2.0 FILLING OF TENDER DOCUMENTS

2.1 The tenderer shall quote the rates for all the items in the price bid only.

2.2 Tenderer must distinctly understand that they will be strictly required to conform to the conditions of this contract as contained in each of its clauses and the plea of CUSTOM PREVAILING will not on any account be admitted as an excuse on their part for infringement of any of the conditions.

2.3 Tender should be strictly in accordance with specifications and other tender documents.

2.4 **Any offer which does not comply with the tender conditions or contains counter conditions may be treated as invalid.** Vendors' Digital signature on the technical bid is considered total acceptance of the terms and conditions. However, if tenderers wish to give any additional information, the same may be given in a separate covering letter.

2.5 The quoted rates shall be valid for a period as specified in the NIT.

2.6 Tenderer must not resort to unsolicited revision of Tender Document. Any type of unsolicited revision will disqualify the tenderer.

2.7 If the successful tenderer, during specified time period, fails to accept the Letter of Intent (LOI), work order, placed at his original quoted rates or subsequently negotiated rates, as the case may be, the earnest money shall be forfeited.

2.8 Once the quotation is accepted and the Letter of Intent (LOI)/ purchase order is placed on the successful tenderer, the validity will remain same till completion of delivery in all respects. No escalation in the cost of materials, labour, transportation shall be entertained at any stage of the contract till the job is completed in all respect.

2.9 Incomplete tenders, conditional tenders or tender not conforming to the terms and conditions prescribed in the tender documents are likely to be rejected.

2.10 **Any deviations from IOCL's standard terms and conditions as well as Technical Data sheet, should be brought out in _____ giving the details of Annexure No, Page No, IOC's requirement Vs Vendor's offer/views.**

2.12 The Corporation is not bound to accept the lowest tender and reserves the rights to reject any or every tender or split the order without assigning any reason whatsoever and/or to carry out negotiations with the vendors in the manner considered suitable to the Corporation.

2.13 Any terms and conditions attached/printed overleaf of the vendors offers will not be binding on the Corporation.

3.0 SUBMISSION OF TENDERS:

3.1 The Technical Bid, Price Bid and subsequent communications if any have to be digitally signed and uploaded on the website before due date and time of tender submission. Indian Oil shall not be responsible in any way for failure on the part of the bidder to follow the instructions.

The submission of online bid as well as submission of physical documents shall be up to time as specified in NIT.

3.2 It is mandatory for every tenderer to provide all the information as set out in the tender document irrespective of their earlier association with IOCL. Any conditional / incomplete offer or failure to follow above instructions shall lead to disqualification.

3.4 Tenderers are advised not to send / upload un-necessary / unsolicited / additional documents. The same will not be evaluated.

PUTTING A PARTY ON HOLIDAY LIST

("Party" means Bidder/ Licensor/ Tenderer/ Consultant/ Contractor/ Contractor/ Sub-contractor/ sub-contractor/ Sub-consultant)

1. A Party may be put on holiday list in the event of any one or more of the following:
   If a Party
   a. Has indulged in malpractices such as bribery, corruption, fraud and pilferage, bid rigging / price rigging
   b. Is bankrupt or insolvent or is being dissolved or has resolved to be wound up or proceedings for winding up or dissolution has been instituted.
   c. Has submitted fake, false or forged documents/ certificates
   d. Has substituted materials in lieu of materials supplied by IOCL or has not returned or has short returned or has unauthorizedly disposed off materials/ documents/ drawings/tools or plants or equipment supplied by IOCL

e. Has obtained official company information or copies of documents, in relation to the tender/ contract, by questionable methods/ means
f. Has deliberately violated and circumvented the provisions of labour laws/ regulations/ rules, safety norms or other statutory requirements.
g. Has deliberately indulged in construction and erection of defective works or supply of defective materials.
h. Has not cleared IOCL's previous dues.
i. Has committed breach of Contract or has failed to perform a contract or has abandoned the contract.
j. Has refused to accept Fax of Acceptance/ Letter of Acceptance/ Purchase Order/ Work Order after the same is issued by IOCL within the validity period and as per agreed terms and conditions
k. After opening of Price Bid, on becoming L1, withdraws/ revises his bid upwards within the validity period.
l. Has parted with, leaked or provided confidential/ proprietary information of IOCL given to the party only for his use (in discharge of his obligations against an order) to any third party without prior consent of IOCL
m. Any other ground for which in the opinion of the Corporation makes it undesirable to deal with the party.

2. If a communication is received from the Administrative Ministry of IOCL to ban a party from dealing with IOCL, the party shall be automatically put on Holiday list.

3. A complaint book shall be maintained by the successful contractor for lodging of complaints. Suitable penalty shall be levied in case of noncompliance with any stipulated standard as per the tender conditions and shall be recovered from the RA bill.

4. No separate payment will be made by IOCL for works covered under scope of work or pre-requisites for the contract, until and unless specifically mentioned.

5. Special conditions of contract will be read in conjunction with the general conditions of contract and all other document forming part of this contract. Notwithstanding the subdivisions of the document into these separate sections, every part of each will be deemed to be supplementary to and complimentary to every other part and will be with and into the document as far as it may be applicable to do so.

6. Where any portion of the general condition of contract is repugnant to or at variance with any provision of special conditions of contract, the provision of special conditions of contract will be deemed to override the provision of general conditions of contract and will be to the extent of such repugnancy of variation prevail.

7. Any conditional / incomplete offer or failure to follow above instructions shall lead to disqualification. Providing any details of rates offered in the technical commercial bid section will lead to disqualification of the bidder.

ANNEXURE-A

Rate Discovery
(To be submitted by Successful Bidder)

S.No.	Category	Component Description *If cloud service has multiple pricing components, rows should be repeated with different types of charges*	CSP Cloud Service Mapping	Unit of Pricing the Item	Price Discovery Price / Unit / Month	Any Other Remark
	Fixed	Fixed	To Be filled by Bidder	To Be filled by Bidder	To Be filled by Bidder	To Be filled by Bidder
Variable Components						
1	Serverless Compute	Serverless Compute				
2	Serverless Compute	Serverless Compute				
3	Block Storage	SSD Block Storage				
4	Serverless Container Registry	Serverless Container Registry Service				
5	Serverless API Component	API Component				
6	Serverless API Component	API Component				
7	Serverless API Component	API Component				
8	Serverless Database	Serverless Database				
9	Serverless Database	Serverless Database				
10	Serverless Database	Serverless Database				
11	Serverless Database	Serverless Database				
12	Serverless Database	Serverless Database				
13	Object Storage	Geo-redundant Object Storage				
14	Data Warehouse	Serverless/ Fully Managed Data Warehouse				
15	Data Warehouse	Serverless/ Fully Managed Data Warehouse				
16	Object Storage	Geo-redundant Object Storage				
17	Archive Storage	Geo-redundant Archive Storage				
18	Data Warehouse	Fully Managed Data Warehouse				
19	Serverless / Fully Managed ETL	Serverless Query Service				
20	Network	Dedicated Network Connectivity				

21	User Management	Serverless User Management Service for Portal				
22	Pub-Sub Service	Serverless Pub-Sub Service				
23	Pub-Sub Service	Serverless Pub-Sub Service				
24	Pub-Sub Service	Serverless Pub-Sub Service				
25	Serverless / Fully Managed ETL	Cloud Service for ETL				
26	Serverless / Fully Managed ETL	Cloud Service for ETL				
27	Content Delivery Network	Content Delivery Network				
28	Notification Service	Serverless Notification Service				
29	Notification Service	Serverless Notification Service				
30	Logging	Cloud Service for Logging				
31	Logging	Cloud Service for Log Insights				
32	Logging	Cloud Service for Log Dashboards				
33	Data Out	Cloud Data Out				
34	Domain Name Service	Cloud Native DNS				
35	Domain Name Service	Cloud Native DNS				
36	Identify and Access Management	Cloud Service for Identity and Access Management				
37	Security	Cloud Service for DDoS Protection - Layer 4				
38	Security	Cloud Firewall Service to control inbound and outbound traffic based on rules				
39	Security	Cloud Managed Threat Detection Service				
40	Security	Cloud Managed Threat Detection Service				
41	Security	Cloud Managed Threat Detection Service				
42	Security	Serverless Web Application Firewall				
43	Security	Serverless Web Application Firewall				
44	Security	Serverless Web Application Firewall				
45	Security	Serverless Key Management Service				
46	Security	Serverless Key Management Service				
47	Security	Cloud Service for Network Firewall				

48	Security	Cloud Service for Network Firewall				
49	CI/CD	Cloud Configuration Management				
50	CI/CD	Cloud Service for Application Monitoring				
51	CI/CD	Cloud Service for Application Monitoring				
52	CI/CD	Cloud Service for Audit Trail				
53	CI/CD	Cloud Service for Audit Trail				
54	CI/CD	Serverless CI/CD Service				
55	CI/CD	Serverless CI/CD Service				
56	CI/CD	Serverless CI/CD Service				
57	CI/CD	Serverless CI/CD Service				
Fixed Components						
61	Serverless BI	Cloud Service for Visualization				
62	Serverless BI	Cloud Service for Visualization				
58	Security	Cloud Service for Managed HSM				
60	Security	Site to Site VPN				
59	Security	Cloud Service for DDoS Protection - Layer 7				

"* Please add/remove as per the Cloud Service Offered.
* All cloud offering shall be part of price discovery."

ANNEXURE-B

INDIAN OIL CORPORATION LIMITED – LIST OF DIRECTORS

The list of Directors of Indian Oil Corporation Limited is available in Indian Oil website: https://iocl.com/AboutUs/Management.aspx Tenderers are requested to visit the website and accordingly Declaration "A", "B" "C" & "D" to be made & furnished.

ANNEXURE-C

CONFIRMATION ON APPLICABILITY OF "MICRO AND SMALL ENTERPRISES ORDER 2012

1. We confirm that provisions of "Micro and Small Enterprises Order 2012 are applicable to us, and our organization falls under the definition of:

a. Micro Enterprise – [_____]

b. Small Enterprise – [_____]

c. SC/ST Owned MSE – [_____]

d. Women Owned MSE – [_____]

(Please put a tick in the appropriate box)

Detail of MSME Certificate:

a) Registration / Certificate Number:
b) Valid up to:
c) Issuing Authority:
d) Tendered item is covered in registration / certificate (Yes / No):

2. Copy of proof of valid document / certificate (indicating registration no.) of being a Micro / Small Enterprises is enclosed.

3. Copy of SC/ST Certificate issued by competent authority is enclosed.

Place: Signature of Authorized Signatory

Date: Name:

Seal: Designation:

ANNEXURE-D

PAYMENT TO VENDORS THROUGH ELECTRONIC MODE

Payment system to Vendors through Electronic Modes such as EFT, RTGS etc. has been introduced by the Corporation. For availing this facility, a consent letter from the Vendor as also the Bank Account details of the Vendor is required.

Tenderers are requested to submit their Consent Letter as per the format given below along with the enclosures as required:

Dated:

To,
M/s Indian Oil Corporation Ltd.
Address
Dear Sir,

With reference to your advice, we hereby agree to accept the payment of our bills through "RTGS/NEFT/Electronic Mode".

The desired bank account details are given below:

1.	Vendor Code allotted by IOCL in SAP	
2.	Name of Beneficiary (i.e IOCL Vendor)	
3.	Name of the Beneficiary's Bank	
4.	Address of the Beneficiary's Bank Branch	
5.	Contact details of Branch with STD Code	
6.	Beneficiary's Bank Account No. (as per cheque copy)	
7.	Beneficiary's Account Type (SB/CC/CA)	
8.	Beneficiary's Bank IFSC Code (11 Digit)	
9.	Mobile No of Beneficiary (One Number only)	
10.	E-Mail Id of Beneficiary (One Mail Id only)	

A blank cancelled cheque leaf relating to the above bank account is enclosed for verifying the accuracy of the bank account details.

I hereby declare that the particulars given above are correct and complete. I agree to receive transactional SMS / E-Mail Alerts from IOCL with regard to my bill payments.

(Signature of Account Holder)

Seal of the Vendor

Encl: Cancelled Cheque

**** We hereby confirm that the above bank account details of beneficiary are correct in all respects and the account of Beneficiary (IOCL vendor) is maintained at our bank branch.

(Name of Bank & Branch)

Authorized Signatory

**** Verification required only in case vendors name is not printed/appearing on the cancelled cheque leaf being submitted to IOCL office.

ANNEXURE-E

INTEGRITY PACT AGREEMENT

Covering Letter required to be signed and submitted by the tenderer along with the Bid.

Ref: Dated:

To,
Indian Oil Corporation Limited

Sub: Submission of Offer for Tender no. _____ for _____.

Dear Sir,
The Bidder acknowledges that Indian Oil Corporation Limited (IOCL) has signed the MOU with Transparency International India for the adoption of the Integrity Pact Program and stands committed to following the principles thereof as enumerated in the Integrity Agreement enclosed with the tender document.

The Bidder agrees that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the enclosed Integrity Agreement, which is an integral part of tender documents, failing which the tenderer will stand disqualified from the tendering process. The Bidder acknowledges that the Bid would be kept open in its original form without variation or modification for a period of _____ days (state the number of days from the last date for the receipt of tenders stated in the NIT) AND THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

Bidder confirms acceptance and compliance with the Integrity Agreement in letter and spirit and further agrees that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when bid is finally accepted by IOCL. The Bidder acknowledges and accepts the duration of the Integrity Agreement, which shall be in line with Article 8 of the enclosed Integrity Agreement.

Bidder acknowledges that in the event of Bidder's failure to sign and accept the Integrity Agreement, while submitting the Bid, IOCL shall have unqualified, absolute and unfettered right to disqualify the tenderer and reject the Bid in accordance with the terms and conditions of the tender.
Yours faithfully,

(Duly authorized Signatory of the Bidder)
(Note - One copy of this letter along with the Integrity Agreement duly signed must be returned along with the offer).

To be executed on plain paper and submitted along with Technical Bid/Tender documents. To be signed by the bidder and same signatory competent/authorized to sign the relevant contract on behalf of IOCL.

(Marketing Division)

Tender No.: _____

INTEGRITY AGREEMENT

This Integrity Agreement is made at _____ on this _____ day of _____, 2021 BETWEEN Indian Oil Corporation Limited, a company duly incorporated and validly existing under the provisions of Companies Act, 1956 and having its registered office at Indian Oil Bhavan, 9, Ali Yavar Jung Marg, Bandra (East), Mumbai 400051 (hereinafter referred as the 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

And

…… (name and address of the Individual/firm/Company/consortium members through _____ (mention details of duly authorized signatory) hereinafter referred as the "Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns.

Preamble

WHEREAS the Principal/Owner has floated a tender **(Tender No.: _____)** (herein-after referred to as "Tender") and intends to award, under laid down organizational procedures, contract/s purchase order/work order for _____ or items covered under the tender hereinafter referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS, in order to achieve these goals, the Principal/Owner has appointed Independent External Monitors (IEMs), to monitor the Tender process and the execution of the Contract for compliance with the principles as laid down in this Agreement.

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesseth as under:

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

b) No employee of the Principal/ Owner, personally or through any of his/her family members, will, in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

c) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

d) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC) /Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2-Commitments of the Bidder(s)/Contractor(s)

1) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or document provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. In a tender, either the Indian agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender. Further, if an agent submits bid on behalf of the Principal/OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product. Copy of CVC guidelines dated 13/01/2012 is annexed hereto as **Annexure A.**

e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose (with each tender as per proforma enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

2) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Article 3. Disqualification from Tender Process and Exclusion from Future Contracts

1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner is entitled to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate the Contract, if already executed or exclude the Bidder/ Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be for a period of 1 year to 3 years as per the procedure prescribed in the guidelines for holiday listing of the Principal/Owner.

2) The Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right to resort to and impose such exclusion.

3) Apart from the above, the Principal/Owner may take action for banning of business dealings/holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.

Article 4-Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(/Contractor(s):

1) **Forfeiture of EMD/Security Deposit**: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated the Contract or has accrued the right to terminate the Contract according to Article 3, the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the Earnest Money Deposit/ Bid-Security amount of the Bidder/Contractor.

2) **Criminal Liability**: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of PC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to the Chief Vigilance Officer.

Article 5- Previous Transgression

1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country confirming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the Tender process.

2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/ Contractor as deemed fit by the Principal/ Owner.

3) If the Bidder/Contractor can prove that he has resorted \recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion as per laid down organizational procedures, revoke the exclusion prematurely.

Article 6- Equal Treatment of all Bidders/Contractors/Subcontractors

1) The Bidder(s)/Contractor(s) has to undertake from all Subcontractors a commitment in conformity with this Integrity Pact. It shall be the responsibility of the Principal Contractor to ensure adoption of/conformity to IP by the Sub-Contractor. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.

2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.

3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 7-Independent External Monitor (IEMs)

1) The Principal/Owner has appointed competent and credible Independent External Monitor(s) (IEMs) for this Pact. The task of the Monitors is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

2) The IEMs are not subject to instructions by the representatives of the parties and perform their functions neutrally and independently. They report to the Chairman, Indian Oil Corporation Limited.

3) The Bidder(s)/Contractor(s) accepts that the IEMs have the right to access, without restriction, to all Project documentation of the Principal/Owner including that provided by the Contractor, as and when required. The Contractor will also grant the IEMs, upon their request and demonstration of a valid interest, unrestricted and unconditional access to his or any of his Sub-Contractor's project documentation. The IEMs are under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality. For this purpose, IEMs are required to sign Non-Disclosure Agreement along with Declaration of No Conflict of Interest at the time of appointment as IEMs. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.

4) As soon as the IEMs notice, or believe to notice, a violation of this Pact, he will so inform the Management of the Principal/Owner and request the Management to discontinue or take corrective action, or to take other relevant action. The IEMs can in this regard submit non-binding recommendations.

5) The IEMs will submit a written report to the Chairman, Indian Oil Corporation Limited within thirty days from the date of reference or intimation to them by the Principal/Owner and, should the occasion arise, submit proposals for correcting problematic situations.

6) If the IEMs have reported to the Chairman, Indian Oil Corporation Limited a substantiated suspicion of an offence under the relevant IPC/PC Act, and the Chairman, IOCL has not, within reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the IEMs may also transmit the information directly to the Central Vigilance Commissioner.

Article 8 - Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor 12 months after the completion of work under the Contract or till the continuation of defect liability period,

whichever is more and for all other Bidders, till the Contract has been awarded.
If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/determined by the Chairman, IOCL.

Article 9-Other Provisions

1) This Pact is subject to Indian law, place of performance and jurisdiction is the Head Office/Head Quarters of the Division of the Principal/Owner, who has floated the Tender.

2) Changes and supplements need to be made in writing. Side agreements have not been made.

3) If the Bidder is a Partnership Firm, IP is required to be signed by all the Partners. If the Bidder is a Consortium/Unincorporated Joint Venture/Association of Persons, formed solely for the purpose of executing the tendered project, this Pact must be signed by all the Partners/members of such Consortium/Unincorporated Joint Ventures/Association of Persons. In case Bidder is a Company, including Joint Venture Company, the Pact must be signed by a representative of the Company duly authorized by board resolution.

4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

5) Any dispute or difference arising between the parties with regard to the terms of this Agreement/Pact, any action taken by the Owner/Principal in accordance with this Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 10- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Pact will have precedence over the Tender/Contract documents with regard any of the provisions covered under this Pact.

IN WITNESS WHEREOF the parties have signed and executed this Pact at the place and date first above mentioned in the presence of following witnesses:

_____

(For and on behalf of Principal/Owner)

_____

(For and on behalf of Bidder/Contractor)

WITNESSES:

1. _____ (signature, name and address)

2. _____ (signature, name and address)

Note: In case of Purchase Orders wherein formal agreements are not signed references to witnesses may be deleted from the last part of the Agreement

ANNEXURE-F

Certification by the statutory auditor/ Cost auditor/ practicing Chartered Accountant

We……..., having our registered office address…… and certificate number……certify that we are statutory auditor / cost auditor / practicing CA not being an employee / Director and not having any interest of the Company M/s…….. having it registered office at……..

We have understood the provisions of Purchase Preference {Linked with Local Content) 2020 (PPLC) Policy, enclosed in the above bidding document.

We hereby certify that offer is achieving the claimed local content target of **>=50% as Class I Local Supplier / >= 20% and < 50% as Class II Local supplier** (Specify what is applicable) as per PP-LC Policy.

(Statutory auditor / Cost Auditor/ practicing Chartered Accountant of the bidder)

Note: This undertaking shall be certified by:

i. The Proprietor and an independent Chartered Accountant, not being an employee of the firm, in case of a proprietorship firm.

ii. Any one of the partners and an independent Chartered Accountant, not being an employee of the firm, in case of a partnership firm.

iii. Statutory auditors in case of a company. However, where statutory auditors are not mandatory as per laws of the country where bidder is registered, an independent chartered accountant, not being an Employee of the bidder's organization.

ANNEXURE-G

Clause with respect to countries with land border with India

1. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. Copy of the registration certificate is to be submitted along with the bid.
2. The Competent Authority for the purpose of registration shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
3. Registration should be valid at the time of submission of bids and at the time of acceptance of bids. If the bidder was validly registered at the time of acceptance/ placement of order, registration shall not be a relevant consideration during contract execution.
4. However, the bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in developmental projects may participate in this tender and they shall not require any separate registration for the participation.
5. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in this tender.
6. Bidder from a country which shares a land border with India for the purpose of this Order means
   i. Any entity incorporated, established or registered in such a country; or
   ii. A subsidiary of an entity incorporated, established or registered in such a country; or
   iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
   iv. An entity whose "beneficial owner" is situated in such a country; or
   v. An Indian (or other) agent of such an entity; or
   vi. A natural person who is a citizen of such a country; or
   vii. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
7. "Beneficial Owner" in the above paragraph will be as under:
   i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means

      Explanation –

   a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty five

percent of shares or capital or profits of the company;

b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.

ii. In case of partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

iii. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

iv. Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

v. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

8. "Agent" is a person employed to do any act for another, or to represent another in dealings with third persons.
9. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
10. Bidders shall submit a certificate as per the Annexure regarding their compliance to the above conditions. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

ANNEXURE-H

BANK GUARANTEE FOR SECURITY DEPOSIT
(FOR INDIAN VENDORS)
(ON STAMP PAPER OF APPROPRIATE VALUE)

Purchase Contract no: _____

Bank Guarantee No.	_____
Date:	_____
Amount:	_____
Valid upto:	_____

Indian Oil Corporation Limited
(Marketing Division)

(TO BE ADRESSSED TO CONCERNED OFFICE)

1. In consideration of the INDIAN OIL CORPORATION LIMITED, having its Registered Office at G-9, Ali Yavar Jung Marg, Bandra (East), BOMBAY- 400 051 (hereafter called "the Corporation") having agreed to exempt M/s. _____ having its office at _____ (hereinafter called "the said Sellers") from the demand under the terms and conditions of a Purchase Contract No MM/_____ dated _____ made between the Corporation and _____ (hereinafter called "the said Agreement"), of Security Deposit for the due fulfilment by "the said Seller" of the terms and conditions contained in the said purchase order, on production of a bank Guarantee of Rs_____ (Rs. _____only). We, _____ hereinafter referred to as "the Bank" (at the request of M/s. _____ (Seller) do hereby undertake to pay to the Corporation an amount not exceeding Rs. _____ (Rs. _____) against any loss or damage caused to or suffered or would be caused to or suffered by the Corporation by Reason of any breach by the said Vendors of any of the terms of conditions contained in the said Purchase Contract Agreement.

2. We _____ (indicate name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Corporation stating that the amount claimed is due by way of loss or damage caused to or suffered by the Corporation by reason of breach by the said Vendors of any of the terms or conditions contained in the said Purchase contract or by reason of the sellers's failure to perform the said purchase Contract. Any such demand made on the Bank shall be conclusive as regards the amount due by the Bank under this guarantee. However, our liability

under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____)

3. We _____ (indicate name of bank) undertake to pay to the Corporation any money so demanded not withstanding any disputes raised by the Seller in any suit or proceeding pending before any court of Tribunal or Arbitrator relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Sellers shall have no claim against us for making such payment.

4. We, _____ (indicate name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Purchase Contract and that it shall continue to be enforceable till all the dues of the Corporation under or by virtue of the said Purchase Contract have been fully paid and its claims satisfied or discharged or till the Corporation certifies that the terms and conditions of the said Purchase Contract have been fully and properly carried out by the said Seller and accordingly discharge this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before _____we shall be discharged from all liability under this guarantee thereafter.

5. We, _____ (indicate name of the Bank) further agree with the Corporation that the Corporation shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Purchase Contract or to extend time of performance by the said Seller from time to time or to postpone for any time or from time to time any of the powers exercisable by the Corporation against the said Seller and to forebear or enforce any of the terms and conditions relating to the said Purchase Contract and shall not be relieved from our liability by reasons of any such variation, or extension being granted to the said Seller or for any forbearance act or omission on the part of the Corporation or any indulgence by the Corporation to the said Seller or by any such matter or thing whatsoever which under the law relating to sureties would but for this provisions have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Seller.

7. We, _____ (indicate name of the Bank) lastly undertake not to revoke this guarantee its currency except with previous consent of the Corporation in writing.

Dated the _____ day of _____20__.

FOR_____ (Indicate the name and address of the

Bank)

DATE:
SEAL:
PLACE:

ANNEXURE-I

FORM OF CONTRACT

(On non-judicial stamp paper of appropriate value)
(To be executed on award of the work)

THIS CONTRACT made at Mumbai this _____ day of _____ 201 BETWEEN INDIAN OIL CORPORATION LTD., a Government of India Undertaking registered in India under the Indian Companies Act 1956, having its registered office at G-9, Ali Yavar Jung Marg, Bandra (East), Bombay- 400 051 and the Headquarters at G-9, Ali Yavar Jung Marg, Bandra (East), Bombay- 400 051 Mumbai (hereinafter referred to as the "OWNER" which expression shall include its successors and assigns) of the One Part; AND _____ carrying on business in sole proprietorship/ carrying on business in partnership under the name and style of _____ a Company registered in India under the Indian Companies Act, 1913/ 1956 having its registered office at _____ (hereinafter referred to/ as collectively referred to as the "Contractor" which expression shall include his/ their/ its executors, administrators, representatives and permitted assigns/ successors and permitted assign) of the other part:

WHEREAS

The OWNER desires to have executed the work of _____ more specifically mentioned and described in the contract documents (hereinafter called the 'work' which expression shall include all amendments therein and/ or modifications thereof) and has accepted the tender of the CONTRACTOR for the said work.

NOW, THEREFORE THIS CONTRACT WITNESSETH as follows:

ARTICLE - 1

Contract Documents

The following documents shall constitute the Contract documents, namely

(a) This contract;
(b) Tender documents as defined in the General Instructions to Tenderers;
(c) Letter of Acceptance of Tender along with Fax/ Telegram of Intent.

A copy of each of the Tender Documents is annexed hereto and the said copies have been collectively marked Annexure 'A' while a copy of the letter of Acceptance of Tender along with annexures thereto and a copy of Fax/Telegram of Intent dated _____ are annexed hereto and said copies have been collectively marked as Annexure 'B".

ARTICLE - 2

Work to Be Performed

The CONTRACTOR shall perform the work upon the terms and conditions and within the item specified in the Contract documents,

ARTICLE - 3

Compensation

3.1 Subject to and upon the terms and conditions contained in the Contract documents, the OWNER shall pay CONTRACTOR compensation as specified in the Contract documents upon the satisfactory completion of the work and/ or otherwise as may be specified in the Contract documents.

ARTICLE - 4

Jurisdiction

Notwithstanding any other court or courts having jurisdiction to decide the question(s) forming the

subject matter of the reference if the same had been the subject matter of a suit, any and all actions and proceedings arising out of or relative to the contract (including any arbitration in terms thereof) shall lie only in the court of competent civil jurisdiction in this behalf at _____ (where this Contract has been signed on behalf of the OWNER) and only the said Court(s) shall have jurisdiction to entertain and try any such action(s) and/ or proceeding(s) to the exclusion of all other Courts.

ARTICLE – 5
Entire Contract
The Contract documents mentioned in Article - I hereof embody the entire Contract between the parties hereto, and the parties declare that in entering into this Contract they do not rely upon any previous representation, whether express or implied and whether written or oral, or any inducement, understanding or agreements of any kind not included within the Contract documents and all prior negotiations, representations, contacts and/ or agreements and understandings relative to the work are hereby cancelled.

ARTICLE – 6
Notices
Subject to any provisions in the Contract documents to the contrary, any notice, order or communication sought to be served by the CONTRACTOR on the OWNER with reference to the Contract shall be deemed to have been sufficiently served upon the OWNER (notwithstanding any enabling provisions under any law to the contrary) only if delivered by hand or by Registered Acknowledgment Due Post to the Engineer in- Charge as defined in the General Conditions of Contract.
Without prejudice to any other mode of service provided for in the Contract Documents or otherwise available to the OWNER, any notice, order or other communication sought to be served by the OWNER on the CONTRACTOR with reference to the Contract, shall be deemed to have been sufficiently served if delivered by hand or through Registered Post Acknowledgement Due to the principal office of the CONTRACTOR at _____ or to the CONTRACTOR's representatives as referred to in the General Conditions of Contract forming part of the Contract Documents.

ARTICLE-7
Waiver
No failure or delay by the OWNER in enforcing any right or remedy of the OWNER in terms of the Contract or any obligation or liability of the CONTRACTOR in terms thereof shall be deemed to be a waiver of such right, remedy, obligation or liability, as the case may be, by the OWNER and notwithstanding such failure or delay, the OWNER shall be entitled at any time to enforce such right, remedy, obligation or liability, as the case may be.

ARTICLE-8
Non-Assignability
8.1 The Contract and benefits and obligations thereof shall be strictly personal to the CONTRACTOR and shall not on any account be assignable or transferable by the CONTRACTOR.
IN WITNESS WHEREOF the parties hereto have executed this Contract in duplicate the place, day and year first above written
SIGNED AND DELIVERED for and on behalf of INDIAN OIL CORPORATION LTD.
by.....
in the presence of
1.
2.

SIGNED AND DELIVERED for and on behalf of
..... (CONTRACTOR)
by.....
(This day of _____ 20___)
in the presence of
1.
2.

ANNEXURE-J

FORMAT FOR NON-DISCLOSURE AGREEMENT (NDA)
To Be Submitted By Successful Bidder
(on non-judicial stamp paper of appropriate value)

NON-DISCLOSURE AGREEMENT

THIS AGREEMENT is made this <Date > between:

INDIAN OIL CORPORATION LTD., a company registered in India under the Indian Companies Act, 1956 having its registered office at G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai- 400 051 and having the office at IIPM Complex, Gurgaon (hereinafter referred to as the "Corporation" which expression shall include its successors and assigns) of the one part

AND
……., (no & Address .....
----------(hereinafter referred to as "……" which expression shall include its successors and assigns) of the other part;

WHEREAS the Corporation with an objective of providing secure and reliable business information to its stakeholders has commenced security assessment of its server.

AND WHEREAS the Corporation has, under the contract dtd ------- (hereinafter referred 'the Contract'), awarded the Contract to <ORG NAME> towards < Name of work >

AND WHEREAS for the performance under the said assessment, <ORG NAME> will be exposed to and made available substantial proprietary and confidential information (as hereinafter defined) which the Corporation has developed, acquired and / or accumulated and / or will develop, acquire and / or accumulate based on recommendations;

ANDWHEREAS the Corporation would like to ensure the confidentiality of such disclosures and the proprietary interests therein and in any customization of the products of any other services and/or development performed by <ORG NAME>pursuant to the said <Name of work > or that <ORG NAME>may be exposed to or that may be made available to it pursuant thereto;

NOW, THEREFORE, in consideration of the said premises, the parties hereto agree as follows:

1. Unless repugnant to the subject or context thereof, the following expressions hereinused shall have the meanings hereunder respectively assigned to them, namely:

"Confidential Information" shall include any and all information, material, ideas and concepts, whether proprietary or not, in whatever form, tangible and intangible known or available to or acquired or developed by or for or accumulated by the Corporation or otherwise forming part of the pool of knowledge or information of the Corporation or applied by the Corporation for the

conduct of its business or affairs and/or in formulation of its business and management strategies including (but not limited to) the following:

a. Parameters and information relative to the design, sizing or operation of the systems, sub-systems and software that are in place.

b. improvements, modifications and customized versions of the procedures/ plan developed by incorporating and/or utilising the data and information belonging to and/or furnished and/or made available by the Corporation.

c. any and all information that has or could have commercial value or other utility in the business in which the Corporation is engaged or contemplates engaging and the unauthorized disclosure of which could be detrimental to the interests of the Corporation whether or not such information is identified as confidential Information by the Corporation.

2. <ORG NAME>undertakes that all Confidential Information delivered or received by it or made available to it or acquired by it pursuant to the said Contract:

a. shall be held in strict confidence and not used, reproduced or disclosed in whole or in part or in any form except as herein authorized or may be later authorized in writing;

b. shall not be distributed, disclosed or disseminated in whole or in part or in any form by <ORG NAME>to any person/ authority except its own employees/certification authority in discharge of their duties who have given or are bound by an appropriate undertaking of secrecy no less stringent than the undertakings of <ORG NAME>in terms hereof;

c. shall be treated by <ORG NAME>with the same degree of care to avoid disclosure to any third party as it would with respect to <ORG NAME>'sown information of like importance.

3. The provisions of Clause 2, hereof shall not apply to any portion of the Confidential Information which is:

a. already in the public domain or becomes available to the public through no breach of the Agreement;

b. was in <ORG NAME>'s possession prior to the disclosure hereunder or development pursuant to the contract;

c. is received by <ORG NAME> independently from a third party who is lawfully in possession of it and free to disclose such information without restriction of user.

Confidential Information shall not be deemed to be in public domain merely because any part of the Confidential Information is embodied in general disclosures or if individual

features, components or combinations thereof are now or in future shall come to the public domain.

4. <ORG_NAME> will be entitled to disclose Confidential Information if, and to the extent, required by any applicable law or an order of a court, government or intergovernmental agency, or other official judicial or regulatory body of competent jurisdiction, provided that <ORG_NAME> will (except to the extent expressly prohibited by any such law or order):

a. notify IOCL prior to such disclosure specifying the Confidential Information that is required to be disclosed and to whom;

b. cooperate with IOCL to prevent or limit such disclosure to the extent reasonably practicable; and

c. use reasonable endeavors to ensure the Confidential Information is kept confidential by <ORG_NAME>.

5. <ORG_NAME> may disclose the Confidential Information to its directors, officers and employees (the **"Authorized Representatives")** with a bona fide need to know such Confidential Information, but only to the extent necessary for the Purpose and only if such Authorized Representatives are advised of the confidential nature of such Confidential Information and the terms of this Agreement and are bound by a written agreement not less restrictive than the terms of this Agreement to protect the confidentiality of such Confidential Information. <ORG_NAME> shall be responsible and liable for any breach of the terms of this Agreement by any Authorized Representative as if it were a breach by <ORG_NAME >

6. Upon completion of the said Contract or its earlier determination or on the request of IOCL <ORG NAME> shall promptly (a) cease use of the Confidential Information and ensure that all persons to whom the Confidential Information was disclosed or made available in accordance with Clause 2 shall do the same; (b) return to IOCL all copies of Confidential Information disclosed or made available by IOCL(without retaining any copy),; and (c) destroy all notes, abstracts and other documents and permanently erase (to the extent technically practicable) all electronic files that contain or reproduce Confidential Information, and shall provide to IOCL, a written certification of an officer of <ORG NAME > that it has done so.

7. <ORG NAME>acknowledges that any and all proprietary and intellectual property rights in any and all developments with respect to <Name of work> shall vest in the Corporation and shall form part of the Confidential Information.

8. The disclosure to <ORG NAME>of Confidential Information under this Agreement or the development by them under the contract shall not in any manner be construed as granting <ORG NAME>any right, copyright or any other present or future proprietary right in respect thereof other than the approval to use the same for and in the performance of the said Contract, and <ORG NAME>shall not without specific approval from the Corporation use or incorporate or permit the use or incorporation of the development.

9. This Agreement shall terminate upon the termination of the Contract. <ORG NAME>'s obligations under this Agreement shall survive termination of this Agreement till years from the date of termination.

10. Any breach of any provisions herein by <ORG NAME>will constitute immediate and irreparable damage to the Corporation which cannot be adequately compensated in money. <ORG NAME>acknowledges that <ORG NAME>shall be liable for any such breach or unauthorised disclosure and in such event, damages will not constitute adequate remedy and the Corporation shall, without prejudice to any other right or remedy available to the Corporation, be entitled to obtain relief by way of prohibitory and / or mandatory injunction, without prejudice to any other rights which it may have for and other relief in relation to any breach or threatened or anticipated breach.

11. Nothing contained in this Agreement shall be deemed to constitute any Party a partner, joint venturer or employee of the other Party for any purpose.

12. If any provision of this Agreement (or part of any provision) is found by any court or other authority of competent jurisdiction to be invalid, illegal or unenforceable, that provision or part-provision shall, to the extent required, be deemed not to form part of this Agreement, and the validity and enforceability of the other provisions shall remain in force and shall not be affected.

13. No amendments or modifications of this Agreement will be valid or binding on the Parties unless made in writing and signed by each Party's duly authorized representative.

14. The Parties agree that no failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege hereunder.

15. Any notice which shall or may be given pursuant to this Agreement shall be in writing and shall be deemed given the day personally delivered, or if sent by courier or express mail service, postage prepaid, certified or registered, return receipt requested sent to the addresses first set forth above. Either Party may change its address by notice to the other Party.

16. None of the Parties shall be liable for the acts or omissions of the other Party under this Agreement and no claim, action or proceeding shall be brought, issued or entered into against a Party for the acts or omissions of the other Party.

17. (For Indian Parties) This Agreement will be governed by and construed in accordance with the laws of India. All disputes, controversies or claims (whether contractual or non-contractual) arising out of, or in connection with, this Agreement shall be finally settled by arbitration under the Rules of Mumbai High Court Arbitration Centre or

Indian Council of Arbitration (ICA) by one or more arbitrators appointed in accordance with the said Rules. The seat of the arbitration shall be Mumbai, India and the language of the arbitration shall be English.

In case of a CPSE or Central Government department/undertaking
*In the event of any dispute or difference relating to the interpretation and application of the provisions of this MoU, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shallnot be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

In case of foreign Party
This Agreement will be governed by and construed in accordance with English Laws. All disputes, controversies or claims (whether contractual or non-contractual) arising out of, or in connection with, this Agreement shall be finally settled by arbitration in accordance with Rules of International Chamber of Commerce Arbitration Rules bya sole arbitrator or a panel of arbitrators appointed in accordance with the said Rules. The seat of the arbitration shall be London and the language of the arbitration shallbe English.

OR This Agreement will be governed by and construed in accordance with Laws of Singapore. All disputes, controversies or claims (whether contractual or noncontractual) arising out of, or in connection with, this Agreement shall be finally settled by arbitration in accordance with Singapore International Arbitration Centre Rules (SIAC) Rules by one or more arbitrators appointed in accordance with the said Rules. The seat of the arbitration shall be Singapore and the language of the arbitration shall be English.

IN WITNESS WHEREOF the parties have caused this Agreement to be duly executed on the date, month and year hereinabove.

For and on behalf of
For and on behalf of INDIAN OIL CORPORATION LTD.

Name: _____	Name: _____
Signature: _____	Signature: _____
Designation: _____	Designation: _____
Date: _____	Date: _____

IndianOil A Maharatna Company	**TENDER NO: HCC/IS-05/PT-50/2022-23**
	Design, Develop, Implement and Maintain applications (IRAS/ICPAS) on Cloud Platform for IOCL Marketing Division for 5 years.

****

Signature Not Verified
Digitally signed by RAJEEV RANJAN
Date: 2022.07.07 09:50:14 IST
Location: Indian Oil Corporation Ltd-IOCL