



**Request for Proposal
for
Supply and Rate contract for the procurement of OLT and ONT
For KFON FTTH Network**

Tender Ref No: KSITIL/KFON/2023-24/7675

June 2023

Published by
Kerala State Information Technology Infrastructure Limited
First Floor, Saankethika, PF Road, Pattom palace P.O
Thiruvananthapuram- 695004

DISCLAIMER

The information contained in this tender or subsequently provided to Applicants, whether verbally or in documentary or any other form by or on behalf of the Authority or any of its employees or advisers, is provided to Applicants on the terms and conditions set out in this tender and such other terms and conditions subject to which such information is provided.

This tender is issued by the The Managing Director, Kerala State Information Technology Infrastructure Ltd. This tender is not an agreement and is neither an offer nor an invitation by the Authority to the prospective Applicants or any other person. The purpose of this tender is to provide interested parties with information that may be useful to them in the formulation of their Bid pursuant to this Tender. This Tender includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to Supply and Rate contract for the procurement of OLT and ONT for KFON FTTH Network. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This Tender may not be appropriate for all persons, and it is not possible for the Authority, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this Tender. The assumptions, assessments, statements and information contained in this Tender, may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this Tender and obtain independent advice from appropriate sources.

Information provided in this Tender to the Applicants is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

The Authority, its employees and advisers make no representation or warranty and shall have no liability to any person including any Applicant under any law, statute, and rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this Tender or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the Tender and any assessment, assumption, statement or information contained therein or deemed to form part of this Tender or arising in any way in this selection process.

The Authority also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Applicant upon the statements contained in this Tender. The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this Tender. The issue of this Tender does not imply that the Authority is bound to select an Applicant or Applicants, as the case may be, and the Authority reserves the right to reject all or any of the Proposals without assigning any reason whatsoever.

The Applicant shall bear all costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by the Authority or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Applicant and the Authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Bid, regardless of the conduct or outcome of the selection process.

Glossary of Terms

Abbreviation	Description
KSITIL	Kerala State Information Technology Infrastructure Limited
KFON	Kerala Fibre Optic Network
BG	Bank Guarantee
BoQ	Bill of Quantity
DD	Demand Draft
EMD	Earnest Money Deposit
EoI	Expression of Interest
GoI	Government of India
GoK	Government of Kerala
KIIFB	Kerala Infrastructure Investment Fund Board
LoI	Letter of Intent
MAF	Manufacturer Authorization Form
MoU	Memorandum of Understanding
SI	System Integrator
NDA	Non-Disclosure Agreement
NIT	Notice Inviting Tender
NOC	Network Operation Center
OEM	Original Equipment Manufacturer
OFC	Optical Fibre Cable
PMU	Project Management Unit
PoP	Point of Presence
RfP	Request for Proposal
RoW	Right of Way
SLA	Service Level Agreement
FTTH	Fiber-to-the-Home
OEM	Original Equipment Manufacture
SOR	Schedule of Rate
PERT	Program Evaluation Review Technique

Table of Contents

DISCLAIMER.....	2
TABLE OF CONTENTS	4
DEFINITIONS	6
1 BIDDING DATA SHEET.....	8
2 ABOUT THE PROJECT.....	10
KFON NETWORK ARCHIECTURE	10
KFON NETWORK DESCRIPTION	10
3 INSTRUCTIONS TO BIDDERS.....	11
3.1 PROCUREMENT UNDER KERALA FIBRE OPTIC NETWORK.....	11
3.2 GENERAL	11
3.3 DUE DILIGENCE	12
3.4 COST OF BIDDING	12
3.5 LANGUAGE OF THE BID.....	12
3.6 PRE-BID MEETING & CLARIFICATIONS.....	12
3.6.1 Responses to Pre-Bid Queries and Issue of Corrigendum	13
3.6.2 Tender Fees	13
3.6.3 Earnest Money Deposit (EMD)	13
3.6.4 Completeness of Response	14
3.6.5 Bid Prices.....	14
3.6.6 Firm Prices.....	14
3.6.7 Conditional bids by the bidders	14
3.6.8 Bid Validity Period.....	15
3.7 LOCAL CONDITIONS	15
3.8 TENDER OPENING	15
3.9 CLARIFICATION OF BIDS	15
3.10 RIGHT TO ACCEPT ANY BID AND REJECT ANY OR ALL BIDS	15
3.11 NOTIFICATION OF AWARD	15
3.12 PERFORMANCE SECURITY (PS)	15
3.13 SIGNING OF CONTRACT	16
3.14 TERMS AND CONDITIONS OF THE TENDER	16
4 EVALUATION FRAMEWORK.....	16
4.1 TWO STAGE BID SYSTEM	16
4.2 BID EVALUATION	18
4.3 EXAMINATION OF BID DOCUMENTS AGAINST ELIGIBILITY CRITERIA.....	18
4.4 EVALUATION OF DOCUMENT	18
4.5 PRE-QUALIFICATION CRITERIA.....	18
4.6 TECHNICAL EVALUATION CRITERIA	20
4.7 EVALUATION OF COMMERCIAL BID.....	22
4.8 SPLITTING OF ORDERS	22
4.9 REJECTION CRITERIA-	22
4.9.1 General rejection criteria	22
4.9.2 Technical Rejection Criteria.....	22
4.9.3 Commercial Rejection Criteria	23
4.9.4 Fraud and Corrupt Practices.....	23
4.9.5 Conflict of Interest	24

5	SCOPE OF WORK.....	25
5.1	SCHEDULE OF REQUIREMENTS.....	25
6	TECHNICAL SPECIFICATION.....	26
6.1	TECHNICAL SPECIFICATION OF OLT.....	26
7	TECHNICAL SPECIFICATION OF ONT	33
7.1	xPON ONT TYPE-1.....	33
7.2	xPON ONT TYPE-2.....	34
8	TECHNICAL SPECIFICATION OF GPON SFP	35
9	TERMS AND CONDITIONS:.....	36
9.1	OFFER LETTER AND VALIDITY OF OFFER	36
9.2	WARRANTY	36
9.3	WARRANTY SUPPORT	36
10	PAYMENT SCHEDULE.....	36
11	PROJECT DELIVERABLE AND TIMELINES.....	37
12	PURCHASE’S RIGHT TO VARY QUANTITIES.....	37
13	RATE CONTACT	37
	FORMAT FOR TECHNICAL BID COVER LETTER.....	38
	FORMAT FOR COMMERCIAL BID COVER LETTER	39
	FORMAT FOR PROJECT EXPERIENCE CITATIONS.....	41
	FORMAT FOR MANUFACTURER AUTHORIZATION.....	42
	FORMAT FOR AFFIDAVIT.....	44

Definitions

#	Term	Definition
1.	Agreement/ Contract	the Agreement entered between Authority and the Successful Bidder including all attachments, schedules, annexure thereto and all documents incorporated by reference therein and all amendments, corrigendum /corrigenda, changes thereto
2.	Client/ Authority	Kerala State Information Technology Infrastructure Limited, represented by the its Managing Director
3.	Bidder	The use of the term “Bidder” in the Tender means the agency participating in this tender.
4.	Bid/Proposal	Offer by the Bidder to fulfil the requirement of the Client/Authority under the RfP/Contract for an agreed price. It shall be a comprehensive technical and commercial response to the Tender
5.	Breach	A breach by Bidder of any of its obligations under this Agreement
6.	Confidential Information	All information including Authority’s data (whether in written, oral, electronic or other format) which relates to the technical, financial and business affairs, dealers, suppliers, products, developments, operations, processes, data, trade secrets, design rights, know-how, plans, budget and personnel of each department and its affiliates which is disclosed to or otherwise learned by the other Party in the course of or in connection with this Agreement (including without limitation such information received during negotiations, location visits and meetings in connection with this Agreement);
7.	Control	Control means the term “Control” as defined in section 2(27) of the Companies Act, 2013
8.	Deliverables of the Agencies	Products, infrastructure and services agreed to be delivered by the Bidder in pursuance of the agreement as defined more elaborately in the RfP and includes all related documents like manuals inter alia payment and/or process related etc., source code and all its modifications
9.	Intellectual Property Rights	All rights in written designs and copyrights, trademarks, moral rights, rights in databases and Bespoke Software / Pre-existing work including its up-gradation systems and compilation rights (whether or not any of these are registered and including application for registration)
10.	Month/ Week	The Month shall mean calendar month & Week shall mean calendar week
11.	Project	Project shall mean Supply and Rate contract for the procurement of OLT and ONT for KFON FTTH Network
12.	Project Implementation	Project Implementation as per the quality and testing standards and acceptance criteria prescribed by the Authority or its nominated agencies

RfP for supply and Rate contract for the procurement of OLT and ONT

#	Term	Definition
13.	Request for Proposal/ Tender Document	Written solicitation that conveys to the Bidder, requirements for products/ services that the Authority intends to buy and implement
14.	Service Level	The level of service and other performance criteria which will apply to the Services delivered by the Bidder, executed as part of the Service Agreement
15.	Network System	Network System shall mean the network infrastructure to be laid at each location
16.	Successful Bidder	The Bidder who is qualified & successful in the bidding process and awarded the Contract and will be referred to as Agency

Table 1: Definitions

1 Bidding Data Sheet

Notice Inviting Tender		
1.	Name of the Tender Inviting Authority	KSITIL
2.	Officer Tender Inviting Authority	Managing Director, KSITIL
3.	Name of the Tender	Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network
4.	Tender Reference Number	KSITIL/KFON/2023-24/7675
5.	Tender Type	Open Tender
6.	Tender Category	Supply
7.	Publication of Tender Document	e-Procurement Portal of Govt of Kerala
8.	Contact Person	Company Secretary, KSITIL
9.	Address	Kerala State Information Technology Infrastructure Ltd., First Floor, Saankethika, PF Road, Pattom palace P.O, Thiruvananthapuram 695004
10.	Contact No.	0471-4068006; 2969640
11.	E-Mail ID, for any clarifications	kfon@ksitil.org
12.	Time & last date to submit clarifications	17:00 hrs; 12/06/2023
13.	Pre-bid Meeting	Time: 11:00 AM; Date: 14/06/2023
14.	Pre-Bid Meeting Venue	Online
15.	Procedure for Bid Submission	Submission through e-Procurement Portal of Govt of Kerala
16.	Last Date of Submission of Bids	Time:15 Hrs; Date:28/06/2023
17.	Opening of Technical Bids	Time:15 Hrs; 30/06/2023
18.	Technical Presentation of Bidders	Time:15 Hrs; 30/06/2023
19.	Bid System	1. Technical bid 2. Commercial Bid
20.	Tender Fee (Non –Refundable)	Rs. 17,700/-(Rupees Seventeen Thousand Seven Hundred only) Including GST@18%
21.	EMD (Refundable)	Rs. 500,000 (Rupees Five Lakhs Only)
22.	Validity of the Bid	120 days from the date of opening of price bid
23.	Contract period	3 years
24.	Performance Security (PS)	5% of the total contract value In the form of a Bank Guarantee issued by any Nationalized Bank in favour of “The Managing Director, Kerala State IT Infrastructure Ltd.”, payable at Thiruvananthapuram. Performance Security must be furnished within 15

RfP for supply and Rate contract for the procurement of OLT and ONT

Notice Inviting Tender		
		days from the date of receipt of notification of award (Letter of Intent)
25.	Performance Security validity period	Three (3) months beyond expiry of contract period
26.	Period of Signing the Contract	Within 15 days from the date of receipt of notification of award (Letter of Intent)
27.	Terms & Conditions	As per the Tender document

Table 2: Bidding Data Sheet

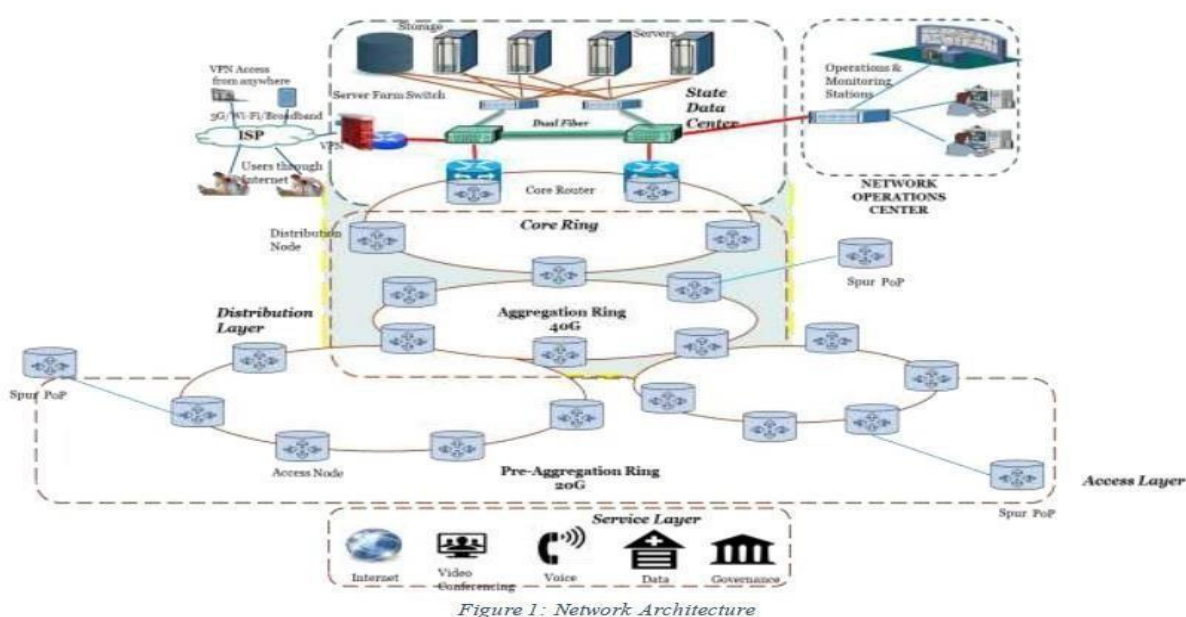
Note:

- Please visit <https://etenders.kerala.gov.in/> for further details regarding the e-tendering process.
- All the notification/details and terms and conditions regarding this tender notice hereafter will be published on line on web site <https://etenders.kerala.gov.in/>
- All the clarifications / corrigendum to the queries will be published on the above said websites.

2 About the Project

Government of Kerala has commissioned a dedicated optical fibre network capable of efficient service delivery, assured Quality of Service (QoS), reliability, interoperability, redundancy, security, and scalability, across Kerala covering 14 districts through the KFON project. This project has enabled connectivity to about 30,000 Government institutions and is about to embark on providing FTTH connectivity. For more details, please visit <https://etenders.kerala.gov.in/>

KFON Network Architecture



KFON Network Description

Point of Presence (PoP)

The PoPs for Kerala Fibre Optic Network are located inside KSEBL owned substations. These PoPs have been divided into Core, Aggregation, Pre-Aggregation and Spur PoPs. The substations which could not be brought under either core, aggregation or pre-aggregation rings shall be treated as Spur PoPs.

Core POP

One substation in each district is the Core PoP. All the Core PoPs are interconnected with NOC and State Data Centre, thus creating an inter-district route through the DWDM equipment's and Juniper MX960 Routers (2 Nos.). This ring will carry all the traffic from the districts up to the NOC and the State Data Centre. Also, the core ring is designed to carry the traffic from one district to another. The core ring is designed to carry 100 Gbps traffic at each district which can be scaled up if required in the future.

Aggregation POP

Each district has one aggregation ring which shall connect the Core PoP with 4 or 5 PoPs within that district. This layer of the network will aggregate traffic coming from all the horizontal offices/homes/enterprises connected to the aggregation PoPs (Juniper MX 480 routers), spurs to aggregation rings and pre-aggregation rings' traffic and route into NOC, Data Centre, and district to district through core ring. The traffic will aggregate at Core PoP of the respective district. Each Aggregation Ring is of 40 Gbps capacity which can be scaled up if required in the future.

Pre- Aggregation POP

The remaining rings are considered as pre-aggregation rings (Juniper MX 204 HA routers) within the district, and it connects to the aggregation ring. These rings will aggregate at an aggregation PoP and will carry the traffic coming from all the horizontal offices/homes/enterprises connected to the pre-aggregation PoPs and spurs to pre-aggregation rings. There may be multiple pre-aggregation rings in a district. These rings shall be of 20 Gbps capacity which can be scaled up if required in the future.

Spur POP

Remote location PoPs which could not be connected in the ring are termed as Spur PoPs with 10 Gbps capacity scalable if required in the future.

Network Operating Centre (NOC)

The State level NOC of Kerala Fibre Optic Network is the heart of operations and management of the statewide network under this project. KFON has laid down the infrastructure for providing connectivity to all government institutions/home/enterprises and has the provision for leasing dark fibre and selling bulk bandwidth to various service providers to enable delivery of end-user services.

3 Instructions to Bidders

3.1 Procurement under Kerala Fibre Optic Network

MD, KSITIL invites bids from bidders who can Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network.

- a) Participating entities shall agree to adhere to the Terms & Conditions and Scope & Services mentioned in this tender.
- b) All the terms and conditions are to be read jointly as mentioned in the website (<https://etenders.kerala.gov.in/>) and in this document.
- c) The tender document is available on the e-Procurement portal of the Government of Kerala <https://etenders.kerala.gov.in/>

3.2 General

- a) While every effort has been made to provide comprehensive and accurate background information, requirements and specifications, Bidders must form their own conclusions about the services required. Bidders and recipients may wish to consult their own legal advisers in relation to this RfP

- b) All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by the Authority on the basis of this RfP.
- c) The Authority may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of the Authority.
- d) This RfP supersedes and replaces any previous public documentation and communications, and Bidders should place no reliance on such communications.

3.3 Due Diligence

Bidder is expected to examine all instructions, forms, terms and specifications in the Tender Document. The Bid should be precise, complete and in the prescribed format as per the requirement of the Tender Document. Failure to furnish all information required by the Tender Document or submission of a bid not responsive to the Tender Document in every respect will be at the Bidder's risk and may result in rejection of the bid.

3.4 Cost of Bidding

Bidder shall bear all costs associated with the preparation and submission of its Bid and the Authority shall in no event be held responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

3.5 Language of the Bid

The bids prepared by the Bidder and all subsequent correspondence and documents relating to the Bids exchanged by the Bidder and the Authority shall be written in the English language. Any printed literature furnished by the Bidder, written in another language, shall be accompanied by an accurate English translation, in which case, for purposes of interpretation of the Bid, the English translation shall prevail.

3.6 Pre-Bid Meeting & Clarifications

- a) The Authority will host a Pre-Bid meeting for answering queries (if any) by the prospective bidders. The purpose of the pre-bid meeting is to provide a forum to the bidders to clarify their doubts / seek clarification or additional information necessary for them to submit their Bid. The Authority reserves the right to hold or re-schedule the Pre-Bid meeting.
- b) The Pre-Bid meeting will be held on the date and venue as specified in the Bidding Data Sheet. The bidder or the representatives of the bidders as authorized in writing by the respective organization (limited to two) may attend the pre-bid meeting at their own cost.
- c) The Bidders will have to ensure that their queries for Pre-Bid meeting should reach the Authority by **email only (Excel File)** on or before the last date for sending pre-bid queries mentioned in the Bidding Data Sheet of this document by the bidder/authorized representative of the Bidder with subject line: **“Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network PRE-BID QUERY”**.
- d) The queries should necessarily be submitted in the following format:

Sl. No.	Page No.	Section No.	Content/Clause of the RfP requiring clarification	Clarification Sought
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- e) Queries submitted post the deadline mentioned in the website or which do not adhere to the above mentioned format may not be responded to. The Authority shall not be responsible for ensuring that they have received the Bidder's queries.
- f) Bidders are requested to submit the e-mail address, mobile no. of the bidder/authorized representatives and registered address for all communications.

3.6.1 Responses to Pre-Bid Queries and Issue of Corrigendum

- a) The Authority shall provide timely response to the queries. However, the Authority makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does the Authority undertake to answer all the queries that have been posted by the Bidders.
- b) At any time prior to the last date for receipt of bids, the Authority may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RfP document by a corrigendum.
- c) The Corrigendum (if any) & clarifications to the queries from all bidders will be posted only on <https://etenders.kerala.gov.in/>
- d) Any such Corrigendum shall be deemed to be incorporated into this RfP. In each instance in which provisions of the Corrigenda contradict or are inconsistent/ inapplicable with the provisions of the Tender Document, the provisions of the Corrigenda shall prevail and govern, and the contradicted or inconsistent/inapplicable provisions of the Tender shall be deemed amended accordingly.
- e) In order to provide prospective Bidders reasonable time for taking the Corrigendum into account, the Authority may, at its discretion, extend the last date for the receipt of Proposals.

3.6.2 Tender Fees

Bidder needs to pay tender fee as per the Bidding Data Sheet.

3.6.3 Earnest Money Deposit (EMD)

- a) Bidders should submit the EMD as per the Bidding Data Sheet.
- b) The EMD of all unsuccessful bidders will be refunded, on receipt of letter of acceptance from Successful Bidder along with security deposit.
- c) The EMD amount is interest free and will be refundable without any accrued interest on it.
- d) The EMD shall be returned to the Successful Bidder upon signing of contract and submission of Performance Security.
- e) The Bid submitted without EMD, mentioned above, will be summarily rejected.
- f) The EMD may be forfeited:

- If a Bidder withdraws its bid during the period of bid validity
- If the Successful Bidder fails to sign the contract or submit Performance Security within the stipulated period.

3.6.4 Completeness of Response

- a) Bidders are advised to study all instructions, forms, terms, requirements, appendices and other information in this RfP document carefully. Online submission of the bid / proposal shall be deemed to have been done after careful study and examination of the RfP document with full understanding of its implications.
- b) Failure to comply with the requirements of this paragraph may render the Proposal non-compliant and the Proposal may be rejected. Bidders must:
 - Comply with all requirements contained in this RfP;
 - Include all supporting documentations specified in this RfP;
 - All pages of the Bid must be numbered and duly signed by the Authorized Signatory accompanied by a Power of Attorney/Board Resolution.

3.6.5 Bid Prices

- a) The Bidder shall indicate in the proforma prescribed, the unit rates and total bid prices for the services, it proposes to provide under the Agreement. Prices should be shown separately for each item as detailed in this Tender Document. The price quoted shall be inclusive of all charges excluding GST. GST shall be payable extra at actual rates.
- b) The Bidder shall carry out all the tasks in accordance with the requirement of the tender documents and with due diligence. It shall be the responsibility of the Bidder to fully meet all the requirements of the Tender Documents and to meet objectives of the Project.

3.6.6 Firm Prices

- a) Prices quoted in the bid must be firm and final and shall not be subject to any modifications, on any account whatsoever. The bid prices shall be indicated in Indian Rupees (INR) only.
- b) The Commercial Bid should clearly indicate the price quoted without any ambiguity / qualifications whatsoever and should include all applicable taxes, duties, fees, levies, and other charges as may be applicable, excluding GST (to be quoted in separate column in the commercial bid) in relation to the activities proposed to be carried out.
- c) Prices in any form or by any reason before opening the Commercial Bid should not be revealed, failing which the offer shall be liable for rejection.

3.6.7 Conditional bids by the bidders

The Bidder should abide by all terms and conditions specified in the Tender Document. Conditional offers shall be liable for dis-qualification.

3.6.8 Bid Validity Period

Bids shall be valid for a period as mentioned in the Bidding Data Sheet. A Bid valid for shorter period may be considered as non-responsive. In exceptional circumstances, at its discretion, the Authority may solicit the Bidder's consent for an extension of the validity period. The request and the responses thereto shall be made in writing or email.

3.7 Local Conditions

- a) Each Bidder is expected to become fully acquainted with the local conditions and factors, which may affect the performance of the contract and /or the cost.
- b) The Bidder is expected to know all conditions and factors, which may have any effect on the execution of the contract after issue of Letter of Intent as described in the bidding document. The Authority shall not entertain any request for clarification from the Bidder regarding such local conditions.
- c) It is the Bidder's responsibility that such factors have been properly investigated and considered before submitting the proposal. No claim, whatsoever, including that for financial adjustment to the contract awarded under the bidding document will be entertained by the Authority. Neither any change in the time schedule of the contract nor any financial adjustments arising there-of shall be permitted by the Authority on account of failure of the Bidder to know the local laws / conditions.

3.8 Tender Opening

Received bids will be opened at the Head Office of KSITIL on the date and time provided in the Bid data Sheet or published in the <https://etenders.kerala.gov.in> Portal of the Government of Kerala. The result of bids will be published in the above portal.

3.9 Clarification of Bids

To assist in the scrutiny, evaluation and comparison of bids, the Authority may, at its discretion, ask some or all Bidders for clarifications with regards to their Bid. The request for such clarifications and the response will necessarily be in writing. Failure of a Bidder to submit additional information or clarification as sought by the Authority within the prescribed period will be considered as a non-compliance and the Bid may be evaluated based on the limited information furnished along with the Bids.

3.10 Right to accept any Bid and reject any or all Bids

The Authority reserves the right to accept or reject any Bid, and to annul the tendering process and reject all Bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for such action.

3.11 Notification of Award

The Authority will notify the Successful Bidder via letter/email of its intent of accepting the Bid. The Successful Bidder shall be required to sign the LoI and return the same to the address and within the specified time period in the Bidding Data Sheet as a token of acceptance of the LoI.

3.12 Performance Security (PS)

As a condition precedent to execution of the Agreement, the Successful Bidder after the tender, shall ensure submission of the requisite unconditional irrevocable Bank Guarantee, in the prescribed format within the time period prescribed in the Bidding Data Sheet as a Performance Security for the services to be performed

under the resultant Agreement. The Bank Guarantee amount and its validity shall be equivalent to that mentioned in the Bidding Data Sheet. Performance Security may be subject to forfeiture as per the clauses mentioned in the Tender Document.

EMD of the Successful Bidder shall be returned on submission of PS by Successful Bidder after successful execution of the Agreement.

The Performance Security may be liquidated by the Authority as penalty / liquidated damages resulting from the agency's failure to honor its obligations under the resultant Agreement. The Performance Security shall be returned by the Authority to the Bidder within thirty (30) days of the term/expiration of the resultant Agreement after applicable deductions as per the Agreement, if any.

3.13 Signing of Contract

Subsequent to the Authority's notification to the Successful Bidder by way of a LOI, acceptance of the LOI and submission of the Performance Security, the Successful Bidder shall execute the Agreement with the Authority. Failure of the Successful Bidder to furnish the Performance Security or execute the agreement within the prescribed time shall cause the EMD of the Successful Bidder to be liquidated. In such an event, the Authority may choose to negotiate with the next eligible Bidder. The Successful Bidder will be liable to indemnify the Authority for any additional cost or expense, incurred on account of failure of the Successful Bidder to execute the Agreement.

Notwithstanding anything to the contrary mentioned above, the Authority at its sole discretion shall have the right to extend the timelines for execution of Agreement on the request of the Successful Bidder, provided the same is bona fide.

3.14 Terms and conditions of the Tender

Bidder is required to enter into a Master Service Agreement for all the terms and conditions (including project timelines) to be adhered to by the Successful Bidder during Project implementation. The following documents shall be deemed to form and be read and construed as part of the Agreement viz.:

- i. The Master Service Agreement confirmed by the Authority with the successful bidder;
- ii. The Letter of Intent;
- iii. The RfP;
- iv. The Proposal and any other documents submitted by the bidder to the extent accepted by the Authority;

4 Evaluation Framework

4.1 Two Stage Bid System

- a) Complete bidding process will be in two stage –bid system. All the notification and details terms and conditions regarding, this tender notice hereafter will be published online on the portal <https://etenders.kerala.gov.in/>

- b) Bidder should submit closed bid as specified in the Tender Document through the e-Procurement Portal of the Government of Kerala.
- c) Technical bids will be opened as per the timeline specified in the datasheet.
- d) The rates should be quoted in the Commercial Bid format attached with the tender.
- e) The Authority reserves the right to accept or reject any or all the tenders without assigning any reason.
- f) Wherever a specific form is prescribed in the RfP document, the Bidder shall use the form to provide relevant information. If the form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the required information. For all other cases, the Bidder shall design a form to hold the required information.
- g) The Authority reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted technical bid at any point of time before opening the Commercial Bid. The Bidder shall furnish the required information to the Authority and its appointed representative on the date asked for, at no cost to the Authority. The Bidder's name, the Bid Price, the total amount of each Bid and other such details as the Tendering Authority may consider appropriate, will be announced and recorded by the Authority at the opening of bid.

The two stage-Bid to be submitted by the Bidder shall consist of the following:

Technical Bid (Cover-1)	<ul style="list-style-type: none">• The Bidder shall furnish, Technical Proposal, documents establishing the technical qualifications, documents supporting technical proposals, proof of registered office in India, Project experience etc. to perform the Contract.• The Technical Bid shall be prepared in accordance with the requirements specified in this Tender and in the formats prescribed in the Tender Document.• Technical Bid should be submitted along with a certified true copy of a board resolution/Power of Attorney empowering authorized signatory to sign/act/execute documents binding the Bidder organization to the terms and conditions detailed in this proposal.• The authorized signatory of the bidder shall sign on all the statements, documents, certificates uploaded by them, owning responsibility for their correctness/ authenticity.• Technical Bid should not contain commercials of the Project, in either explicit or implicit form.• Conditional Technical Bid is liable for rejection.
Commercial Bid (Cover-2)	<ul style="list-style-type: none">• Forms and formats specified in the tender document need to be scrupulously followed. Any deviation in it (without proper justification) may lead to disqualification of the Bid.• Price quotation accompanied by vague and conditional expressions such as "subject to immediate acceptance", "subject to confirmation", etc. will be treated as being at variance and shall be liable to be summarily rejected.• The price quoted shall be inclusive of all charges excluding GST. GST shall be

	payable extra at actual rates.
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The Authority will not accept submission of a bid in any manner other than that specified in the Tender Document. Bids submitted in any other manner shall be treated as defective, invalid and rejected.

Bids must be direct, concise, and complete. The Authority will evaluate Bidder's bid based on its clarity and completeness of its response to the requirements of the project as outlined in this Tender.

4.2 Bid Evaluation

- a) Initial Bid scrutiny will be held. Bid will be treated as non-responsive, if it is
- Not submitted in the format as specified in this RfP document.
 - Received without the Letter of Authorization (Power-of-Attorney)
 - Found with suppression of details
 - Without complete information, subjective, conditional offers and partial offers submitted
 - Submitted without the documents requested in the checklist
 - Have non-compliance of any of the clauses stipulated in the RfP
 - With lesser validity period.

4.3 Examination of Bid documents against Eligibility Criteria

The Bid document will be examined to determine whether the bidder meets the eligibility criteria, whether the proposal is complete in all respects, whether the documents have been properly signed and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or eligibility criteria specified in various sections of this Bid Document will be rejected and will not be considered further.

4.4 Evaluation of document

A detailed evaluation of the bids shall be carried out in order to determine whether the bidders are competent enough and whether the technical aspects are substantially responsive to the requirements set forth in this RfP Document.

All supporting document submitted in support of Eligibility and Technical Evaluation Criteria should comply the following:

- a) Supporting documents should be submitted.
- b) Supporting document should clearly indicate value of the completed project, and the scope of work/ services should be clearly highlighted.
- c) Completion certificate should clearly indicate the value and duration of the project.
- d) In case the Bidder is having Non-Disclosure Agreement (NDA) with their client, no such experience will be counted (if agreement copy not submitted).
- e) Incomplete order copy submitted by the Bidder will not be considered for evaluation.
- f) In case of projects where order for recurring /Extension and subsequent order has been placed on the Bidder only the mentioned order value will be considered for evaluation.
- g) Bidders failing to comply any of the above, may result in rejection of their bid.

4.5 Pre-Qualification Criteria

Qualifying criteria under this clause lays down minimum acceptable qualifications in various areas to ensure that qualified bidder has necessary experience, technical expertise, equipment, and financial and human

RfP for supply and Rate contract for the procurement of OLT and ONT

resources to successfully complete the project. Bids from bidder not meeting these qualification criteria may be liable to be rejected. The Tenderer/bidder should be an Original Equipment Manufacturer (OEM) or authorized representative of OEM specifically authorized by OEM for bidding in this tender.

SN	Pre- Qualification Criteria Requirements	Supporting Document Required
1)	Legal Entity: The bidder should be a Company registered in India under the Companies Act (India) with their registered office in India for the last three years.	Certificate of Incorporation Registration or Memorandum of Association (MoA)
2)	Financial Capability: The bidder should have received a minimum average turnover of Rs. 10 Crs from the similar works in the last three financial years.	Audited Balance Sheet duly certified by the Chartered Accountant or Certificate from Chartered Accountant duly supported by Audited Balance Sheet.
3)	<p>Technical Capability: The tenderer must have successfully completed any of the following during last Three financial years (2020-2021, 2021-2022, 2022-2023)</p> <p>Three similar works each costing not less than Rs. 2 Crs, or Two similar works each costing not less than Rs. 4 Crs, or One similar work costing not less than 5 Crs</p> <p>Note: Completion of work should fall in the above period. The bidder shall also furnish work completion/ substantial work completion certificate issued by customer/s for the Purchase Orders/Work Orders. Substantial completion shall be 80% (value wise) or more works completed under the contract. For contracts under which bidder participated as a Joint Venture member or sub-contractor, only the bidder's share, by value, shall be considered to meet this requirement.</p> <p># Similar Work: Supply of networking products in Projects of Telecom Transmission Network / Data Network/ Broadband Network in Government / PSUs / Telecom Service Providers network / Class A or B ISP Network / Public listed company.</p>	<ul style="list-style-type: none"> Completion certificates with Satisfactory working and value of the work completed from the User Organizations is required to be submitted. In case of substantially completed work, certificate from user for bidder share regarding total value of bidders share of work and value of completed work (minimum 80% of total value of bidders share of work) is required to be submitted. In case of composite work purchase orders, bidder shall submit CA certificate certifying the actual amount pertaining to similar work definition as mentioned in the clause. <p>(The set of documents(s) submitted should clearly certify eligibility criteria and should be verifiable from the user/customer)</p>
4)	The bidder should not have been black- listed currently by Central Govt./State Govt./CPSU/any reputed Telecom service provider in India or anywhere globally by Government for the supply of material / security reasons.	Self-Declaration by the Bidder on Company's letter head
5)	The Bidder or their promoters having equity stake or operating partnership in bidder, should not be holding valid License for Telecom service provider/ISP/ NLD, Services License of Government of India for Telecom Operation.	Undertaking to be submitted by the Bidder
6)	Bidder should have authorization specific to this tender from respective OEM	MAF as per format to be submitted
7)	The tenderers shall submit a notarized affidavit on a non-judicial stamp paper stating that they are not liable to be disqualified and all	Notarized Affidavit as per Format

SN	Pre- Qualification Criteria Requirements	Supporting Document Required
	their state- ment/documents submitted along with bid are true and factual. Standard format of the affidavit to be submitted by the bidder is enclosed in this rfp. Non submission of an affidavit by the bidder may result in rejection of the bid. And it shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self attested by which they/he/she is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of The Authority to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned. The Authority reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the Authority, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification by the Authority shall not relieve the bidder of its obligations or liabilities here under nor will it affect any rights of the Authority thereunder. In case of any wrong information submitted by tenderer, the contract shall be terminated. Earnest Money Deposit (EMD), Performance Security Deposit (PS) of contract forfeited and bidder will be barred for doing business on KSITIL/KFON for 5 (five) years.	
8	Clause wise technical specs compliance along with all mentioned documents/annexures for all clauses to be submitted along with bid by the bidder (i.e., OEM). Back-to-Back warranty with respective OEMs for both Hardware and Software	The certificates/Undertaking for the same will have to be submitted along with bid from respective OEM.

Table 3:Pre-Qualification Criteria

4.6 Technical Evaluation Criteria

Bidders who have qualified in the Pre-Qualification criteria would undergo Technical Evaluation as per the criteria as follows:

S.N.	Technical Criteria Requirements	Documentation required
1	OEM should be a registered in India. In case of imported product also OEM should have a registered office in India to provide after sales service support from India itself	All OEM specific certificates like Certificate of Incorporation, PAN, GSTIN, MSME, UDYAM, STARTUP certificates should be submitted by the bidder of the quoted OEM products.
2	OEM should be ISO 9001, 14001, 27001.	Certificates to be submitted
3	OEM should be having CMMI Maturity Level 5 certificate based on Standard CMMI Appraisal (CMMI-DEV and SVC) Method for Process Improvement.	Certificates to be submitted
4	OEM should have ISO/IEC 15408-1:2009 certificate	Certificates to be submitted

RfP for supply and Rate contract for the procurement of OLT and ONT

5	The OEM should have their own MAC address from it's Indian registered entity.	Certificates to be submitted
6	OEM shall ensure that their Intellectual Property Rights must be from India & not from a Country that shares a Land Border with India.	OEM declaration to be submitted by the authorized signatory having power on attorney
7	Hardware and Software supplied by OEM should not have any malicious code. .	OEM declaration to be submitted by the authorized signatory having power on attorney
8	OEM should not have been blacklisted by Central Govt./State Govt./CPSU in India or anywhere globally by Government for security or any other reasons.	OEM declaration to be submitted by the authorized signatory having power on attorney
9	The Equipment offered by the OEM or equipment of the same series/family from the same OEM should have received PO or supply record from any Government/PSUs/Telecom Service Providers(Class A & Class B ISP) network in India.	The certificates (at least PO COPY) from the actual users will have to be submitted. May also submit self-certificate with proper contact detail of end clients along with quantities supplied (Firm Name, Contact person, Designation, Telephone Number, Fax, Official mail id etc.)
10	OEM should have a Service/Support Centre in Kerala or commitment that OEM will open a service/Support center in Kerala within 60 days in case if contract is awarded	Service center details along with GST no to be shared along with address and contact no. and person. If no service center is available, OEM shall submit a self-declaration stating the service/support center shall be opened within 60 days if contract is awarded
11	The OEM should have proven facilities for Engineering, manufacture, assembly, integration and testing and basic facilities with respect to space, Engineering, Personnel, Test equipment, Manufacture, Training, Repair, Service Center Supports in the country from where the proposed equipment are planned to be supplied.	The certificates/Undertaking for the same will have to be submitted.
12	OEM should have TOLL FREE support Number in India.	Details of the Toll-Free support along with the escalation matrix shall be submitted on the letterhead of the OEM
13	In case of a start-up OEM, DPIIT registration shall be submitted	Registration certificate from DPIIT

Table 4: Technical Evaluation Criteria

The Technical compliance sheet shall be submitted by the bidder for compliance with the standards. All active networking components quoted shall not reach its End of Life within the next five years from the date of publishing of this tender.

4.7 Evaluation of Commercial Bid

Evaluation of bids will be done, based on total cost of SOR (based on L-1 Offer)

Additional features offered by the bidder, over and above the ones asked for in the tender documents, shall not be considered for evaluation of bids

The bidders should quote for all items & the offer will be evaluated in totality. The bidders should indicate brand name, type/model number of the products offered. The equipment should be supplied as per Technical Specifications given.

Price bid will be opened only for the technically qualified bidders. Bid evaluation will be done based on the commercial quote received. Inter se position of the offers will be determined on total unit rate on CIP destination basis which will include basic rate, custom duty, CGST, SGST, IGST, GST, freight, insurance and any other charge or cost quoted by the tenderer, including GST payable on reverse charge by the Authority, wherever applicable.

4.8 Splitting of Orders

Authority reserves the right to split the quantity among two vendors in the ratio of 70:30 or 100% to a single vendor to ensure the continuity of supply. The splitting will be as follows. The lowest quoted vendor(L-1) will be awarded 70% of the tender quantity and L2 will be awarded 30 % of quantity provided L2 matches the L1 rate. If L2 does not match the L1 rate, then L3 will be offered to match the L1 rate and so on. If no party matches the L1 rate, the full quantity will be ordered on L1 vendor.

4.9 Rejection Criteria-

Besides other conditions and terms highlighted in the Tender Document, bids may be rejected under following circumstances:

4.9.1 General rejection criteria

- a) Conditional Bids;
- b) If the information provided by the Bidder is found to be incorrect / misleading / fraudulent at any stage / time during the Tendering Process;
- c) Any effort on the part of a Bidder to influence the bid evaluation, bid comparison or contract award decisions; Bidder shall not approach Authority's officers from the time of the proposal opening till the time the Contract is awarded.
- d) Bids received after the prescribed time and date for receipt of bids;
- e) Bids without signature of person (s) duly authorized on required pages of the bid;
- f) Bids without power of attorney/ board resolution;
- g) Any other reasons mentioned in this RfP elsewhere.

4.9.2 Technical Rejection Criteria

- a) Technical Bid containing commercial details;
- b) Revelation of prices in any form or by any reason before opening the Commercial Bid;

- c) Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect;
- d) Bidders not quoting for the complete scope of work as indicated in the Tender Documents, addendum (if any) and any subsequent information given to the Bidder;
- e) Bidders not complying with the technical and general terms and conditions as stated in the Tender Documents;
- f) Bidder not confirming unconditional acceptance of full responsibility of providing services in accordance with the scope of work of this tender;
- g) Any other reasons mentioned in this RfP elsewhere.

4.9.3 Commercial Rejection Criteria

- a) Incomplete Price Bid;
- b) Price Bids that do not conform to the Tender's price bid format;
- c) Total price quoted by the Bidder shall exclude all statutory taxes and levies applicable;
- d) If there is discrepancy in numerical and words, prices in word shall prevail;
- e) If there is discrepancy in unit rates and total, unit rates shall prevail.

4.9.4 Fraud and Corrupt Practices

- i. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process.
- ii. Notwithstanding anything to the contrary contained in this tender, the Authority shall reject a Proposal without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the — Prohibited Practices) in the Selection Process. In such an event, the Authority shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the tender, including consideration and evaluation of such Bidders Proposal.
- iii. Without prejudice to the rights of the Authority under Clause above and the rights and remedies which the Authority may have under the LoI or the Agreement, if a Bidder or Systems Implementation Agency, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LoI or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or tender issued by the Authority during a period of < period, suggested 5 (five) > years from the date such Bidder, as the case may be, is found by the Authority to have directly or through an

agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

- iv. For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them.

“Corrupt practice” means

- a) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly with the Selection Process or the LoI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or
- b) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LoI or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LoI or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the Authority in relation to any matter concerning the Project;
 - **“fraudulent practice”** means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
 - **“Coercive practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any persons participation or action in the Selection Process;

“Undesirable practice” means

- a) establishing contact with any person connected with or employed or engaged by Authority with the objective of canvassing,
- b) lobbying or in any manner influencing or attempting to influence the Selection Process; or
- c) having a Conflict of Interest; and

“Restrictive practice” means

Forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

4.9.5 Conflict of Interest

The Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in the bidding process if including but not limited to:

- a) they have controlling shareholders in common; or
- b) they receive or have received any direct or indirect subsidy from any of them; or
- c) they have the same legal representative for purposes of this bid; or
- d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

5 Scope of Work

Authority is in the process of providing internet services to 20 lakhs households and other SME/ Enterprise/ Telco/ MSO for ILL, FTTH, Dark fiber leasing and other MPLS services across Kerala through KFON Network. Authority has already set up a NOC in Infopark, Kochi. Authority is implementing ISP infrastructure in the NOC and start provisioning the services to end subscribers. Through this RFP, Authority is intending to select an eligible Bidder for the Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network.

The scope of work would be as mentioned below.

- Supply of OLTs & ONTs as per the technical specifications mentioned in this RFP. The scope shall also include supply of necessary SFPs, PON SFPs and necessary patch cords.
- All the products supplied shall have minimum 3 years warranty from the date of supply.
- Bidder shall ensure that the supplied materials shall work with only KFON network and should not work with any other ISP network. Bidders need to extend the necessary support for integrating with the Authority's Auto-Config Server (ACS) during the contract period.

The bidder shall comply with all the technical specifications for the items being supplied in accordance with the standard. Duly filled copy of this table shall be submitted along with the technical proposal being submitted by the bidder.

5.1 Schedule of Requirements

SI No	Item Description	Unit	Qty
1	GPON OLT with 4 PON Ports	No's	800
2	GPON OLT with 8 PON Ports	No's	200
3	xPON ONT Type-1	No's	80000
4	xPON ONT Type-2	No's	20000
5	GPON SFPs	No's	5000
6	10G SFP+	No's	5000

7	SC/APC OFC patch cords – 2 mts	No's	100000
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6 Technical Specification

6.1 Technical Specification of OLT

Make Offered:	
Model Offered:	

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
1	Generic Requirements	FTTx solution should be based on GPON		
2	Service Interfaces	GPON 2.5G downstream, 1.25G upstream		
		The equipment must be able to operate at the physical distance of 20 km (between OLT and ONU/ONT) without any additional amplification required.		
		The OLT should support Tx - 1310 and Rx - 1490 nm wavelengths		
		The OLT should support a splitting ratio of 1:128		
		The Interfaces for the offered FTTx systems shall be of “plug in type (PIU) SFP modules”		
		The offered OLTs shall be inter- operable with any third party ONTs as per the OMCI standards and must at least be certified by the Broadband Forum BBF.247 . Inter-operability tests shall be done with different vendors		
3	Network Management	Network/Element Management system (EMS) shall be offered.		
		The required NMS in addition to management of network elements shall be incorporated optionally with special network planning and management tools for managing all connections through the FTTx network and modelling, planning and span design for FTTx networks etc.		

RfP for supply and Rate contract for the procurement of OLT and ONT

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		Bidder shall offer Network Management System for the offered equipment to provide the capabilities for configuration, operation, monitoring, remote monitoring, fault localization, and data storage.		
4	FTTx System General Requirements	Should be compliant to the relevant ISO/ETSI industry quality standards (e.g. ISO 9000/9001), defining the quality system requirements for the design, development, production, delivery, installation and maintenance of product and services.		
		The offered equipment shall be able to inter-work with the other user end equipment supplied by other vendors as per ITU-T specifications. It should follow standard G.984.8		
		The offered equipment shall support single fibre operation on standard SMF G.652, G.655 & G.657.		
		The forwarding capabilities on OLT should be no less than 2000pps		
		The equipment shall support IPv4 and IPV6.		
		In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer.		
		The equipment shall detect the optical power transmission of every ONT, once that it detects some problems in the status of the optical transmission power.		
5		DHCP, DHCP option 82/43/37/18 Static IP, PPPoE relay		
		Shall support multiple service delivery of data, voice and video.		
		Shall support IP policing at the network and subscriber end.		
		Shall support Ethernet 802.1p and IP TOS bit prioritization.		
		The OLTs shall be able to support mobile traffic backhauling.		

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		The Equipment must support IP Multicasting to cater for interactive services such as broadcast IPTV, distance learning, etc. The detail implementation of multicasting mechanism must be explained.		
		Trusted connectivity where the QoS setting / traffic prioritization configured by customer can be preserved.		
		Un-trusted connectivity where the QoS setting / traffic prioritization configured by customer can be overwritten by the Equipment.		
		The detail Downstream and Upstream QoS and traffic prioritization mechanism supported inclusive of the hardware queue available for each direction. A minimum of 8 hardware queues should be supported at both directions. The OLT should implement some queuing mechanism to manage the hardware queue such as SP, WRR, etc.		
		Management System shall support bandwidth provisioning starting from 64 kbps granularity.		
		Shall support Dynamic Bandwidth Allocation (DBA) mechanism to allow optimum bandwidth utilization on each PON interface. The detail implementation and capability of DBA mechanism should be explained in detail.		
		Shall support basic OAM features such as loop back, remote diagnostic, Continuity Check, Link Trace and any other required mandatory features		
		Shall comply to ITU-T/IEEE recommendations.		
		ITU-T G.703: Physical/electrical characteristics of hierarchical digital interface.		
		ITU-T G.704: Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 Kbit/s hierarchical levels.		
		ITU-T G.823: The control of jitter and wander within digital networks which are based on the 2048 Kbit/s hierarchy.		

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		ITU-T G.983.4: A broadband optical access system with increased service capability using dynamic bandwidth assignment.		
		ITU-T G.984.1: GPON General Characteristics.		
		ITU-T G.984.2: GPON Physical Media Dependent (PMD) layer specification.		
		ITU-T G.984.3: GPON Transmission convergence layer specification.		
		ITU-T G.984.8: GPON ONT management and control interface specification.		
		Support uplink FEC, downlink FEC(Forward Error Correction)		
		ONU identifier authentication: SN/SN+PASSWD/LOID		
		4K VLAN entries		
		Port-based/MAC-based/IP subnet based VLAN		
		Port-based Q-in-Q and Selective Q-in-Q(Stack VLAN)		
		VLAN Swap and VLAN Remark and VLAN Translate Based on ONU service flow VLAN add, delete, replace		
		STP, RSTP, MSTP protocol support		
		Bi-directional bandwidth control		
		Static link aggregation and LACP		
		Port Mirroring and traffic mirroring support		
		OSPF and BGP support from day one		
		Telnet-based statistics		
		RFC3176 sFlow		
		LLDP		
		RFC 3164 BSD syslog Protocol		
		Ping and traceroute		
		User-based MAC and ARP traffic examination		

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		Restrict ARP traffic of each user and force-out user with abnormal ARP traffic		
		Dynamic ARP table-based binding		
		Supports IP+VLAN+MAC+Port binding		
		L2 to L7 ACL flow filtration mechanism on the 80 bytes of the head of user-defined packet		
		Port-based broadcast/multicast suppression and auto-shutdown risk port		
		URPF to prevent IP address counterfeit and attack		
		DHCP Option82 and PPPOE+ upload user's physical location		
		Plain-text authentication of OSPF/RIPv2 and MD5 cartography authentication		
		ARP Proxy		
		DHCP Relay		
		DHCP Server		
		Static route		
		ICMPv6		
		ICMPv6 redirection		
		DHCPv6		
		ACLv6		
		Configured Tunnel		
		6to4 tunnel		
		IPv6 and IPv4 Tunnels		
		Standard and extended ACL		
		Time Range ACL		
		Packet filter providing filtering based on		
		source/destination MAC address,		
		source/destination IP address, port, protocol,		
		VLAN, VLAN range, MAC address range, or		

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		invalid frame.		
		System supports concurrent identification at most 50-service traffic		
		Support packet filtration of L2~L7 even deep to 80 bytes of IP packet head		
		Rate-limit to packet sending/receiving speed of port or self-defined flow and provide general flow monitor and two-speed tri-colour monitor of self-defined flow		
		Priority remark to port or self-defined flow and provide 802.1P, DSCP priority and Remark		
		CAR(Committed Access Rate),Traffic Shaping and flow statistics		
		Packet mirror and redirection of interface and self-defined flow		
		Super queue scheduler based on port and self-defined flow. Each port/flow supports 8		
		priority queues and scheduler of SP,WRR and SP+WRR.		
		Congestion avoid mechanism, including Tail-Drop and WRED		
		IGMPv1/v2/v3		
		IGMPv1/v2/v3 Snooping		
		IGMP Filter		
		MVR and cross VLAN multicast copy		
		IGMP Fast leave		
		IGMP Proxy		
		MLDv2/MLDv2 Snooping		
		EAPS and GERP(recover-time<50ms)		
		Loop-back detection		
		Flex-Link(recover-time<50ms)		
		RSTP/MSTP(recover-time<1s)		

RfP for supply and Rate contract for the procurement of OLT and ONT

S No.	Parameter	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
		LACP(recover-time<10ms)		
		Double fault-tolerant backup of host program and configuration files		
		Web management		
		Console/Telnet, Command-line interface CLI)		
		Upgrade via FTP		
		System configuration with SNMPv1/v2/v3		
		RMON(Remote Monitoring)		
		Support SNTP network time protocol		
		OLT & ONT should be from the same OEM.		
		Any other standards inter-related with all the above Specifications and any other standards deemed necessary by the bidder.		
6	OLT Hardware features	The OLT shall be rack mountable and meet ETSI standards for indoor equipment requirement.		
		The OLT shall be designed to Operate at 110- 265 ac		
		Dual power supply for redundancy (AC+AC, DC+DC OR AC+DC). Default supply has to be AC+AC until specified by the Authority.		
		working temperature: 0 to 50 deg centigrade"		
		Fan is required for cooling the OLT to force airflow.		
		The OLT shall provide one craft port (RJ45) for local configuration access.		
7	Physical interfaces supported/loaded	For 4 PON Port OLT: 4*PON ports, 2*10G SFP+, 2*1000Base-T		
		For 8 PON Port OLT: 8*PON ports, 2*10G SFP+, 2*1000Base-T		

7 Technical Specification of ONT

7.1 xPON ONT Type-1

Make Offered:			
Model Offered:			
S. No.	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
1	EPON/GPON FTTH CPE with Single Band Wi-Fi and TR069 Support		
2	Should support 20 KMs distance		
3	Support Upstream:1.25Gbps, Downstream:2.5Gbps		
4	Should support IEEE 802.11n/b/g 2.4 GHz		
5	Support QOS features like IEEE 802.1p, CoS, WR, SP and FIFO queue scheduling algorithm Port rate limit IEEE 802.1x, access control based upon Port; support local and remote RADIUS.		
6	Support VLAN features like 802.1Q tag VLAN, VLAN transparent mode/VLAN translation mode/VLAN trunk mode		
7	Access Control features like Parental Control, Local Management Control, Host List, Access Schedule, Rule Management		
8	Support Firewall features		
9	DoS, SPI Firewall		
10	IP Address Filter/MAC Address		
11	Filter/Domain Filter		
12	IP and MAC Address Binding		
13	Should support DHCP Server, Client, DHCP Client List, Address Reservation		
14	Support WAN like Dynamic IP/Static IP/PPPoE		
15	Management support like Access Control, Local Management, Remote Management		
16	Support of IPv4,IPv6		
17	Working temperature: 0°C~45°C Storage temperature:-40°C~80°C		

	Storage humidity:5%~95% non-condensing		
18	Min 2 x 5dBi fixed antennas		
19	Should have WPS/WiFi Button and Reset Button		
20	1 x SC/APC PON Port		
21	1 x 10/100/1000Mbps and 1x10/100 Mbps LAN Port		
22	WEP, WPA / WPA2, WPA-PSK/WPA2-PSK encryption		
23	OLT & ONT should be from the same OEM.		

7.2 xPON ONT Type-2

xPON ONT Type-2	
Make Offered:	
Model Offered:	

S. No.	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
1	EPON/GPON FTTH CPE with Dual Band Wi-Fi and TR069 Support		
2	Should support 20 KMs distance		
3	Support Upstream:1.25Gbps, Downstream:2.5Gbps		
4	Should support IEEE 802.11ac/n/a 5 GHz and IEEE 802.11n/b/g 2.4 GHz		
5	Support QOS features like IEEE 802.1p, CoS, WR, SP and FIFO queue scheduling algorithm Port rate limit IEEE 802.1x, access control based upon Port; support local and remote RADIUS.		
6	Support VLAN features like 802.1Q tag VLAN, VLAN transparent mode/VLAN translation mode/VLAN trunk mode		
7	Access Control features like Parental Control, Local Management Control, Host List, Access Schedule, Rule Management		
8	Support Firewall features		
9	DoS, SPI Firewall		
10	IP Address Filter/MAC Address		
11	Filter/Domain Filter		

S. No.	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
12	IP and MAC Address Binding		
13	Should support DHCP Server, Client, DHCP Client List, Address Reservation		
14	Support WAN like Dynamic IP/Static IP/PPPoE		
15	Management support like Access Control, Local Management, Remote Management		
16	Support of IPv4,IPv6		
17	Working temperature: 0°C~45°C Storage temperature:-40°C~80°C Storage humidity:5%~95% non-condensing		
18	Min 4 x 5dBi fixed antennas		
19	Should have WPS/WiFi Button, Reset Button		
20	1 x SC/APC		
21	2 x 10/100/1000Mbps LAN Port		
22	WEP, WPA / WPA2, WPA-PSK/WPA2-PSK encryption		
23	OLT & ONT should be from the same OEM.		

8 Technical Specification of GPON SFP

GPON SFPs	
Make Offered:	
Model Offered:	

S. No.	Minimum Specification	Compliance Yes/No	Pg. No in Supporting Doc.
1	Type: C+, one fiber Bi-directional Optical Module		
2	Operating wavelength: Tx - 1310 and Rx - 1490 nm		
3	Port Rate: Tx - 2.5 Gbps and Rx - 1.25 Gbps		
4	Minimum optical power output: 3.0 dBm		
5	Maximum optical power output: 7.0 dBm		
6	Maximum receiver sensitivity: -32dBm		
7	Connector Type: SC/PC or SC/APC		
8	Distance supported: 20 Km		
9	Overload Optical power: -12dBm		
10	Extinction ratio: 8.2dBm		

9 Terms and Conditions:

9.1 Offer letter and validity of Offer

The offer should remain valid for a minimum period of 120 days from the date of opening of tender including the date of opening

9.2 Warranty

The warranty would be valid for a period of 36 months from the date of supply. The bidder shall warrant that products to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings. The bid shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Authority who shall state in writing in what respect the products are faulty.

If it becomes necessary for the bidder to replace or renew any defective portion/portions of the supplies under this clause, the provisions of the clause shall apply to the portion/portions of the equipment so replaced or renewed or until the end of the above-mentioned period, whichever may be later. If any defect is not remedied within a reasonable time, the Purchaser may proceed to do the work at the contractor's risk & cost, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects.

Replacement under warranty clause shall be made by the bidder free of all charges at site including freight, insurance, and other incidental charges.

9.3 Warranty Support

Material for repair during Warranty Period shall be handed over /taken over by bidder's engineer/representative at KFON Warehouse locations. During the warranty period, the bidder shall remain responsible to arrange replacement within 5 working days and for setting right at bidder's cost any equipment supplied by bidder which is of defective manufacture or design or becomes unworkable due to any cause whatsoever. The decision of the Authority in this regard to direct the bidder to attend to any damage or defect in work shall be final and binding on the bidder. In case contractor fails to replace any faulty part within 5 working days period, penalties will be imposed.

10 Payment Schedule

- 90% of the payment on the supply made on receipt of material by the consignee (at site/the stores, to be decided by the Authority duly inspected and on submission of the following documents subject to any deductions or recovery which Authority may be entitled to make under the contract:
 - (i) Valid Tax Invoice
 - (ii) Delivery Challan/ E-way bill
 - (iii) Packing list.
 - (iv) Factory Test Report.
 - (v) Purchaser's Inspection certificate
 - (vi) Consignee receipt

- (vii) Warranty certificate of OEM
- (viii) Certificate duly signed by the firm certifying that equipment/ materials being supplied are new and conform to technical specification.
- 3% on submission of provisional acceptance of the supplied materials which shall be provided after completion of 12 months of supply and satisfactory performance.
- 3% on submission of provisional acceptance of the supplied materials which shall be provided after completion of 24 months of supply and satisfactory performance.
- Balance 4% on submission of Full acceptance of the supplied materials which shall be provided after completion of 36 month of supply and satisfactory performance.

11 Project Deliverable and Timelines

The materials as per SOR are required to be delivered within 150 days from the issue of LOA/Purchase Order. Bidder can deliver the material in different Lots. The bidder is required to submit the PERT chart showing the various activities which are required for supply of the equipment. The materials shall be delivered to the site as given by the Authority. Consignee address and details will be provided to the successful bidder.

12 Purchase's Right to vary Quantities

The Authority shall be at liberty to enhance or reduce +/- 25% of the quantity mentioned in the LOA/Sub PO/PO as indicated in the SOR without assigning any reasons. The bidder shall comply with such modifications unconditionally provided these are made before completion of the deliveries under the purchase order/LOA. Any such change in quantity shall have no impact on the rates mentioned in the purchase order/LOA for any such item.

13 Rate Contact

Authority, if required, may enter Rate Contract with the bidder to whom the contract is awarded for catering to additional requirement of Equipment & Cards as and when arise in future. Rate Contract on the successful tenderer would be placed separately and would be operative from the date of LOA and would be valid for a period of 24 months. The validity of rate contract may be extended for further 12 months with mutual agreement. This Rate Contract would be at the same rates as finalized in main contract. During the validity of Rate Contract, Authority will place Sub Purchase Orders for Equipment & Cards detailed in SOR, as per requirement. However, during the period of Rate contract, if the prices of the materials mentioned in the SOR is reduced, then the proportionate price benefit should be passed on to the Authority. The total variation under Rate Contract is up to 50% of contract value shall be restricted for these SOR items.

FORMAT FOR TECHNICAL BID COVER LETTER

(On Company Letter Head)

To,

Managing Director

Kerala State Information Technology Infrastructure Limited,

First Floor, Saankethika, PF Road,

Pattom palace P.O

Thiruvananthapuram 695004

Kerala

Sub: Submission of the response to the Tender No. <<tender id>>. Request for Proposal for Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network

We, the undersigned, offer to provide services Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network project for KSITIL in response to the request for proposal dated <insert date> and tender reference no <> “Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network”. We are hereby submitting our proposal online, which includes the pre-qualification, technical bid, and commercial bid.

We hereby declare that all the information and statements made in this technical bid are true and accept that any misinterpretation contained in it may lead to our disqualification.

We undertake, if our proposal is accepted, to initiate the implementation services related to the assignment not later than the date indicated in this tender.

We agree to abide by all the terms and conditions of the RfP and related corrigendum(s)/ addendum(s). We would hold the terms of our bid valid for 120 days from the date of opening of the commercial bid as stipulated in the RfP.

We hereby declare that as per RfP requirement, we have not been black-listed/ debarred by any Central/ State Government and we are not the subject of legal proceedings for any of the foregoing.

We understand you are not bound to accept any proposal you receive.

Signature of Bidder

Place:

Name

Date:

FORMAT FOR COMMERCIAL BID COVER LETTER

To,

Managing Director

Kerala State Information Technology Infrastructure Limited,

First Floor, Saankethika, PF Road,

Pattom palace P.O

Thiruvananthapuram 695004

Kerala

Dear Sir,

We, the undersigned Bidder, having read and examined in detail all the tender documents with respect to Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network do hereby propose to provide services as specified in the tender reference No. _____. Price and Validity

a. All the prices mentioned in our bid are in accordance with the terms & conditions as specified in the RfP. The validity of bid is 120 days from the date of opening of the commercial bid.

b. We are an Indian firm and do hereby confirm that our prices are inclusive of all duties, levies etc., excluding GST.

c. We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on income tax, professional and any other corporate tax in altered under the law, we shall pay the same.

Unit rates: We have indicated in the relevant schedules enclosed, the unit rates for the purpose of accounting of payments as well as for price adjustment in case of any increase / decrease from the scope of work under the contract.

Deviations: we declare that all the services shall be performed strictly in accordance with the RfP irrespective of whatever has been stated to the contrary anywhere else in our bid. Further, we agree that additional conditions, if any, found in our bid documents, shall not be given effect to.

We have remitted an EMD as specified in the tender document terms.

Tender pricing: we further confirm that the prices stated in our bid are in accordance with your instruction to bidders included in tender documents.

RfP for supply and Rate contract for the procurement of OLT and ONT

Qualifying data: we confirm having submitted the information as required by you in your instruction to bidders. In case you require any other further information/ documentary proof in this regard before evaluation of our tender, we agree to furnish the same in time to your satisfaction.

Bid price: we declare that our bid price is for the entire scope of the work as specified in the RfP. These prices are indicated in annexure-commercial bid format attached with our tender as part of the tender.

Performance bank guarantee: we hereby declare that in case the contract is awarded to us, we shall submit the performance bank guarantee. We hereby declare that our tender is made in good faith, without collusion or fraud and the information contained in the tender is true and correct to the best of our knowledge and belief. We understand that our tender is binding on us and that you are not bound to accept a tender you receive.

Signature of Bidder

Place:

Name

Date:

FORMAT FOR PROJECT EXPERIENCE CITATIONS

Sl. No.	Item	Bidder's Response
1	Name of Bidder entity	
2	Assignment Name	
3	Name & Address of Client	
4	Approximate Value of the Contract (in INR Lakhs)	
5	Duration of Assignment (months)	
6	Start Date (month/year)	
7	Completion Date (month/year)	
8	Narrative description of the project	
9	Details of Work that defines the scope relevant to the requirement	
10	Documentary Evidence attached	

FORMAT FOR MANUFACTURER AUTHORIZATION

Ref. No. _____

Date:

To,

Managing Director

Kerala State Information Technology Infrastructure Limited

1st Floor, Sankethika, Vrindavan Gardens,

Patom, Thiruvananthapuram

Kerala

Sub: RFP ref no:

Dear Sir,

Please refer to your Notice Inviting Tenders for Appointment of an Agency for “Supply and Rate contract for Procurement of OLT and ONT for KFON FTTH Network”.

M/S _____ (Bidder), who is our reliable distributor/dealer/reseller for the last _____ years, is hereby authorized to quote on our behalf for this prestigious tender.

We undertake the following regarding the supply of all the equipment and related software as described in this tender

It will be ensured that in the event of being awarded the contract the machines will be delivered by M/s _____ (Bidder) & maintained by M/S _____ properly as per the conditions of the contract. For this purpose, we shall provide M/S _____ (Bidder) necessary technical support including technical updates, software version updates (such as Firmware, Operating System) and upgrades, required patches, replacements & spares to the Bidder as per the RFP conditions. A signed copy of the original equipment warranty agreement (support, repair, replacement) shall be submitted to the client / purchaser at the time of installation.

If M/s _____ fails to maintain the hardware/ software and State is compelled to appoint an operator due to non-maintenance of the equipment supplied by us or for any other reason whatsoever, we will provide necessary support to the new operator as appointed by the State for the remaining period of the project as per the RFP and SLA signed.

The equipment supplied will not be under end of life/ end of sale within the duration of project. Also the supplied equipment in this project shall not be declared end of support within five years of its installation (i.e. from the day of Final Acceptance Test approval by the State). In case it happens M/s _____ will have to replace that equipment with a new equipment with equivalent or higher configuration.

If due to any reason whatsoever, the tie up between our Company & M/S

_____ (Bidder) breaks down subsequently or supply/ installation does not take place for a reason not attributable to State, alternative arrangements as prescribed in earlier points will apply.

.

Yours faithfully,

(NAME) (Name of manufacturers)

Note: This letter of authority shall be on the letterhead of the manufacturer and shall be signed by a person competent and having the power of attorney to bind the manufacturer. It shall be included by the Bidder in Pre-Qualification Criteria.

FORMAT FOR AFFIDAVIT

[Your Company Name]

[Address]

[City, State, ZIP Code]

Affidavit

I, [Your Name], the undersigned, being the authorized representative of [Your Company Name], do solemnly affirm and declare as follows:

I affirm that all the statements and documents submitted along with the bid for the [Project Name] tender are true, accurate, and factual to the best of my knowledge and belief.

I further affirm that [Your Company Name] is not liable to be disqualified from participating in the tender process based on any legal or regulatory requirements.

I acknowledge that any misrepresentation or false information provided in the bid submission may lead to disqualification and legal consequences as per applicable laws and regulations.

I understand that [Your Company Name] may be subject to verification of the submitted information and supporting documents, and I agree to cooperate fully with any such verification process.

I undertake to promptly inform the tendering authority of any changes or updates to the information provided in the bid submission.

I acknowledge that this affidavit is made under oath and any false statements made herein may subject me and [Your Company Name] to legal penalties.

This affidavit is executed with the understanding that it may be relied upon by the tendering authority for the evaluation of the bid submitted by [Your Company Name].

Signed and sworn before me on this [Date] day of [Month], [Year].

[Your Name]

Authorized Representative of [Your Company Name]

Notary Public:

[Notary Public Name]

[Notary Public Seal or Stamp]

[Notary Public Commission Expiry Date]