

BID DOCUMENT

FOR
SUPPLY OF TEST INSTRUMENTS

FOR
FOCS PGCIL PROJECT

Tender No: TCIL/15/1303/1/11-MM/18 E

Date : 17.06.2011

Issued By :

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SECTION - 1

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

NOTICE INVITING TENDERS

Sealed tenders are invited from eligible bidders of Supply of Test Instrument for FOCS PGCIL Project.

Tender documents shall be available from the office of the Group General Manager (MM), 4th Floor, TCIL Bhawan G.K-I, New Delhi - 110 048 on payment of non-refundable fee of Rs. 400.00 by Demand Draft in favour of “**Telecommunications Consultants India Ltd.**”, Payable at New Delhi.

Tenderers requesting tender documents through post should include an additional amount of Rs.50/-. Mailing of tender will be wholly at the risk of the Tenderers.

Last date of sale of **tender documents is 08.07.2011.**

Complete tender documents are also available on TCIL's website, address given below:

[http:// www.tcil-india.com](http://www.tcil-india.com)

The documents downloaded by the parties from the website shall be valid for participation in the tender process. Those making use of the tender documents downloaded from the website shall have to pay the fee of the document in the form of a demand draft along with the tenders. Tenders received without the requisite fee shall be considered as invalid ab-inito.

ELIGIBILITY CRITERIA

1. The Bidder should be a registered Indian Manufacturer/ Authorized Indian dealer of respective Test Instrument.
2. Average Annual Financial Turnover of the bidder during the last 3 years, ending March 2011 should be at least Rs.12.6 lacs.
3. Experience of having successfully supplied similar Test & Measuring Instrument specified in the document for telecom works during the last two years ending May 2011 should be either of the following :

i) Two similar supplies each costing not less than Rs. 10 lacs.

OR

ii) One similar supply costing not less than Rs. 20 lacs.

- The Bidder must be registered in India as Indian Company dealing with above Products.

Note: The bidder shall be required to produce supporting documents in respect of the above Eligibility Criteria.

Earnest money amounting to Rs.25,000/- (Rupees Twenty Five Thousand only) by Demand Draft in favour of “Telecommunications Consultants India Ltd.”/Bank Guarantee in the prescribed format from a scheduled bank from its branch at Delhi/New Delhi shall be submitted along with the tender.

Tenders received without EMD/inadequate EMD shall be summarily rejected.

Two-stage bid system shall be adopted, i.e., Techno-Commercial Offer and Price Offer.

Tender documents fee (when documents are downloaded from website) and EMD shall be part of Techno-Commercial Offer.

The tenders shall be submitted in the Office of the Group General Manager (MM), TCIL, 4th Floor, TCIL Bhawan, G.K.-I, New Delhi-110048 on **or before 15:00 hrs., on 08.07.2011.**

In the first stage, the Techno-Commercial Offers shall be **opened at 16:00 hrs., on 08.07.2011** in the presence of Tenderers or their authorized representatives present at the time of tender opening.

The Price Offers of only those parties who qualify in the first stage shall be opened at time and date to be notified separately.

TCIL reserves the right to accept or reject any or all the tenders without assigning any reason.

(D. MANNA)
Group General Manager (MM)

SECTION - 2

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

INSTRUCTIONS TO BIDDERS

- 2.1 INTRODUCTION (DEFINITIONS)
- 2.2 BIDDER TO BEAR COST OF PURCHASE OF TENDER
- 2.3 BID DOCUMENTS
- 2.4 AMENDMENT TO BID DOCUMENTS
- 2.5 EXTENSION OF TIME
- 2.6 BID PRICE
- 2.7 BIDDERS ELIGIBILITY AND QUALIFICATIONS
- 2.8 BID SECURITY
- 2.9 VALIDITY PERIOD OF BID
- 2.10 FORMAT OF SIGNING OF THE BID
- 2.11 DEADLINE FOR SUBMISSION OF BID
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- 2.15 CLARIFICATION OF BIDS
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- 2.17 PURCHASER'S RIGHT TO VARY QUANTITIES
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- 2.19 NOTIFICATION OF SUCCESSFUL BIDDER
- 2.20 ISSUE OF LETTER OF INTENT
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- 2.22 POST BID CLARIFICATIONS
- 2.23 DELIVERY/TIME FRAME
- 2.24 SUBMISSION OF BID
- 2.25 OPENING OF PRICE Offer

2.1 INTRODUCTION (DEFINITIONS)

- 2.1.1** “Purchaser” means Telecommunications Consultants India Ltd. (TCIL), its Head Quarter at New Delhi or any other project/branch offices within or outside India.
- 2.1.2** “Bidder” means the individual or firm or corporate body or consortium or association of persons who participates in the tender and submits its bid.
- 2.1.3** “Goods/Products” means all the hardware equipments, instruments, tools, machinery etc., and/or other materials like components/parts/spares including consumables which the supplier is required to supply to the Purchaser under the Purchase Order.
- 2.1.4** “Letter of Intent (LOI)” means the communication of the intention of the Purchaser to the Bidder to place the Purchaser Order for the former’s offered goods/services.
- 2.1.5** “Purchase/Work Order (PO)” means the order placed by the Purchaser on the Supplier duly signed by the Purchaser’s authorized representative to purchase certain goods & services from the vendor/contractor.
- 2.1.6** “Contract Price” means considerations payable to the supplier/contractor as stipulated in the Purchase or Work Order for performance of specified contractual obligations.

2.2 BIDDER TO BEAR COST OF PURCHASE OF TENDER

The Bidder shall bear all costs associated with the preparation and submission of the bid. The Purchaser in any case will not be responsible or liable for these costs regardless or the conduct of the bidding process.

2.3 BID DOCUMENTS

- 2.3.1** Bid Documents includes: -

Section 1	Notice Inviting Tender
Section 2	Instructions to Bidders
Section 3	General Conditions of the Contract
Section 4	Special Conditions of Contract
Section 5	Bill of Quantity and Price Bid Schedule
Section 6	Technical Specifications
Section 7	Bid Bond/EMD Format
Section 8	Performance Bank Guarantee (PBG) Format
Section 9	Inspection, Testing, Training, Support Services and Documentation

- 2.3.2** Any clarification or communications obtained from the Purchaser

2.4 AMENDMENT TO BID DOCUMENTS

- 2.4.1** At any time, prior to the date of submission of bids, the Purchaser may for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bid documents by amendments.

2.4.2 The amendments will be notified in writing or by telex or fax to all prospective bidders who have received the bid documents and these amendments will be binding on them.

2.5 EXTENSION OF TIME

In order to give prospective bidders required time in which to take the amendments into action in preparing their bid, the Purchaser may at its discretion extend the deadline for submission of bid suitably.

2.6 BID PRICE

Unit prices/rates shall be quoted as given in Special Conditions of the tender in Section – 4.

2.7 BIDDERS ELIGIBILITY AND QUALIFICATIONS

Bidder shall furnish as a part of bid documents establishing the bidder's eligibility to supply the material. The bidder shall also submit documentary evidence in the form of literature, drawing, data on the goods offered.

2.8 BID SECURITY

2.8.1 The Bidder shall submit, as part of bid security as mentioned in the NIT. The bid security shall be in one of the following forms: -

- (a) A Bank Guarantee as per enclosed format issued by a schedule bank in favour Purchaser valid for a period of 180 days from the date of tender opening.
- (b) Demand Draft or Pay Order from a Scheduled Bank in favour of M/s Telecommunications Consultants of India Ltd., payable at Delhi.

2.8.2 The bid not secured in accordance with the above shall be rejected by the Purchaser as non-responsive.

2.8.3 The bid security of the unsuccessful bidder will be discharged/ returned as promptly as possible but not later than 30 days after expiry of the bid validity period prescribed by the Purchaser.

2.8.4 The successful bidder's bid security will be discharged upon the bidder's submission of the Performance Guarantee.

2.8.5 The bid security may be forfeited under the following circumstances:-

- a) If a bidder withdraws his bid during the period of bid validity specified by the bidder on the bid form.
- b) In case of a successful bidder, if he fails to submit the Performance Guarantee within the time prescribed or
- c) If he fails to supply the material in terms of the project.

2.8.6 No interest is payable on EMD.

2.8.7 In case of inadequacy or non-submission of prescribed EMD, the tender shall be deemed to be disqualified and shall be summarily rejected in the technical evaluation.

2.9 VALIDITY PERIOD OF BID

Bid shall remain valid for 180 days after the date of bid opening. The bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

In exceptional circumstances, the purchaser may request the consent of the bidder for an extension to the period of bid validity. The bid security provided under clause 2.8.1 (a) shall also be suitably extended. A bidder accepting the request and granting extension will not be permitted to modify his bid.

2.10 FORMAT OF SIGNING OF THE BID

2.10.1 The bidder shall prepare two copies of the bid clearly marking as one copy as “Original Copy” and the other as “Copy” & also provide softcopy of technical bid on CD-ROM in MS-Word format.

2.10.2 In the event of any discrepancy between them, original shall prevail.

2.10.3 The original copy of the bid shall be typed and shall be signed by the bidder or a person duly authorized by the bidder. The Letter of Authorization shall be accompanied by a written Power of Attorney accompanying the bid.

2.10.4 All pages of the original bid except printed literature shall be initialed by the person signing the bid.

2.10.5 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder in which case such corrections shall be initialed by the bidder signing the bid.

2.11 DEADLINE FOR SUBMISSION OF BID

Bid must be received by the Purchaser at the address specified and not later than the date and time specified in the NIT.

2.12 LATE BID

Any bid received late by the Purchaser after the deadline for submission of the bid shall be rejected and returned un-opened to the bidder.

2.13 MODIFICATION AND WITHDRAWAL OF BIDS

2.13.1 The bidder may modify or withdraw his bid provided that written notice of modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

2.13.2 No bidder may modify or be allowed to withdraw bid subsequent to the deadline for submission of bids.

2.14 OPENING OF TECHNO-COMMERCIAL OFFER (PART-1)

2.14.1 The Purchaser shall open the Techno-Commercial Offer (Part-1) in the presence of authorized bidder's representatives who choose to attend at date and time specified in the NIT. The bidder's representative who are present shall sign the Attendance Register.

2.14.2 A maximum of two representatives for any bidder shall be permitted and authorized to attend the bid opening.

2.14.3 The date fixed for opening of bids, if subsequently declared as holiday by the TCIL, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

2.15 CLARIFICATION OF BIDS

2.15.1 To assist evaluation and comparison of the bids, the Purchaser may at its discretion may ask the bidder for clarification of the bid. The clarification and response from bidder shall be in writing.

2.15.2 The Purchaser does not bind himself to accept the lowest or any tender and reserves to himself the right to accept the whole or any part of the tender and altering the quantities offered and tenderer shall supply the same at the rate quoted.

2.16 EVALUATION OF TENDERS

2.16.1 The Purchaser shall evaluate the bids in respect to the substantive responsiveness of the bid or otherwise. The Purchaser shall carry out detailed evaluation of the substantially responsive bids. The Purchaser shall check the bid to determine whether they are complete, whether any computational errors have been made or required sureties have been furnished.

2.16.2 Arithmetical error shall be rectified on the following basis :-

- a) If there is a discrepancy between the unit price and total price that is obtained multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected by the Purchaser.
- b) In case of discrepancy between words and figures, the amount in words shall prevail.

2.16.3 A bid determined as substantially non-responsive shall be rejected by the Purchaser.

2.16.4 The Purchaser may waive any minor infirmity or non-conformity or irregularity in the bid which does not constitute a material deviation.

2.16.5 The Purchaser shall evaluate in detail and compare the bids which are substantially responsive.

- 2.16.6 The evaluation of the ranking shall be carried out on the landed price of goods offered inclusive of all taxes.
- 2.16.7 The distribution of tendered quantity amongst the technically and commercially complied bidders shall be based on merits of each case.
- 2.16.8 TCIL shall have the sole discretion in deciding the number of parties on whom the orders shall be finally placed.

2.17 PURCHASER'S RIGHT TO VARY QUANTITIES

- 2.17.1 The Purchaser reserves the right at the time of award of the contract to increase the quantity of the goods and services specified in the schedule of requirements without any change in unit price of the ordered quantity.
- 2.17.2 In case of division of order among number of parties. The distribution of quantity will be accordingly done by the Purchaser on an individual tender.

2.18 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser does not bind himself to accept lowest or any other tender/bid and has the right to cancel the bidding process and reject all bids at any time prior to award of the contract without assigning any reasons whatsoever and without thereby incurring any liability to the affected bidder on the grounds for the Purchaser's action.

2.19 NOTIFICATION OF SUCCESSFUL BIDDER

- 2.19.1 Prior to the expiration of the bid period, the Purchaser will notify the successful bidder in writing by registered letter or fax, to be confirmed in writing by registered letter that its bid has been accepted.
- 2.19.2 Upon successful bidder furnishing of Performance Guarantee, the Purchaser will notify each successful bidder and will discharge its bid bond.

2.20 ISSUE OF LETTER OF INTENT

- 2.20.1 The issue of Letter of Intent shall constitute the intention of the Purchaser to place the Purchase Order with the successful bidder.
- 2.20.2 The bidder shall within 10 days of issue of Letter of Intent give its acceptance along with Performance Guarantee in conformity with the bid documents.

2.21 CANCELLATION OF LETTER OF INTENT

Failure of the successful bidder to comply with the requirement of submission of Performance Guarantee in time shall constitute sufficient ground for the cancellation of the acceptance of bid and forfeiture of the bid bond, in which case Purchaser may make the offer to any other bidder at the discretion of the Purchaser or call for new bids.

2.22 POST BID CLARIFICATIONS

No post bid clarification at the initiative of the bidders shall be entertained and any effort by the bidders to influence the Purchaser in the Purchaser's bid evaluation, bid comparison or award of the contract shall result in rejection of the bid.

2.23 DELIVERY

Delivery of the goods shall be made by the supplier in accordance with the terms specified by the Purchaser in the Special condition of the contract and goods shall remain at the risk of the supplier until delivery have been completed in full. The Schedule of delivery shall be the essence of the contract.

2.24 SUBMISSION OF BID

Sealed offer shall be submitted in two separate envelopes.

Envelope 1 superscribed as PART-1 (Techno-Commercial Offer) shall contain the following:

- a) Documentary evidence in respect of the eligibility criteria mentioned in the N.I.T.
- b) EMD/Bid Bond
- c) Demand Draft for Rs. 400 in favour of "Telecommunications Consultants India Ltd." payable at New Delhi if the tender document is downloaded from the website.
- d) Technical Offer
- e) A statement showing Clause-by-Clause compliance to all the Terms & Conditions of the tender specified at Section 1, 2, 3, 4, 5, 6 & 9.

Envelope 2 superscribed as PART-II (Price Offer) shall contain the Price Bid Schedule as per the format given in Section -5 of the Bid Document.

A single sealed envelope containing both the envelopes (i.e. Envelope 1 & Envelope 2 sealed separately) shall be addressed to the purchaser at the following address:

Group General Manager (MM)
Telecommunications Consultants India Limited,
MM Division,
TCIL Bhawan, Fourth Floor,
Greater Kailash – I, New Delhi – 110 048.
Tel: +91-11-26202020/Ext. 2406
Fax: +91-11-26242266/26241847

The envelopes should be superscribed “Tender No. TCIL/15/1303/1/11-MM/18E dated 17.06.2011 for **“Supply of Fiber Optic Distribution Panel (FODP) for FOCS PGCIL Project”** and also **“Do not open before due date (date to be mentioned)”**”.

The tender may be sent by the tenderers by Courier/Speed-post, with the envelope marked as above. Alternatively, tenders may also be deposited by the tenderers in the tender box kept in MM-Division at 4th floor at TCIL Bhawan.

The tender box shall be sealed at the stipulated deadline for submission.

The tender box shall be opened at the stipulated time of opening in the presence of intending bidders.

The names/designations of concerned officers who can be contacted are mentioned below:

Mr. V.K.Sinha
Joint General Manager (MM)
Tele: 26202412

Mr.Devki Nandan
Manager (MM)
Tele: 26202424

- (i) The inner and outer envelopes shall indicate the name and address of the bidders to identify the bid and to enable the bid to be returned unopened in case it is declared ‘late’ or ‘rejected’.
- (ii) **VENUE OF TENDER OPENING:** Tender shall be opened in 4th floor TCIL Bhawan, New Delhi-110048 at the time on the due date mentioned in the N.I.T. If due to administrative reason the venue of Bid opening is changed it will be duly displayed at the Reception Hall of TCIL Bhawan.
- (iii) Offer received through Fax/E-mail or through open letter shall be ignored.

2.25 OPENING OF PRICE OFFER

Price offer of only those bidders will be opened whose Techno-Commercial offers are found to be qualified and acceptable to TCIL. Bidder’s authorized representative may attend the Price Offer opening. The qualified parties shall be notified with the date, time & venue of the opening of the Price Offer.

-END OF SECTION 2-

SECTION - 3

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

GENERAL (COMMERCIAL) CONDITIONS OF THE CONTRACT

- 3.1 PRICE APPLICABILITY
- 3.2 STANDARDS
- 3.3 PATENT RIGHTS
- 3.4 PERFORMANCE SECURITY
- 3.5 INSPECTION AND TESTS
- 3.6 TRAINING
- 3.7 WARRANTY
- 3.8 CHANGE ORDERS
- 3.9 SUB-LETTING
- 3.10 LIQUIDATED DAMAGES
- 3.11 ARBITRATION
- 3.12 RISK PURCHASE
- 3.13 APPLICABLE LAWS
- 3.14 GENERAL LIEN
- 3.15 PACKING
- 3.16 REPLACEMENT OF DEFECTIVE EQUIPMENT
- 3.17 FORCE MAJEURE
- 3.18 TERMINATION FOR DEFAULT
- 3.19 TERMINATION FOR INSOLVENCY
- 3.20 ADD-ON ORDER

3.1 PRICE APPLICABILITY

Prices in the Purchase Order shall remain valid for the period of delivery schedule or extended delivery schedule. In case of delayed supplies, after delivery period, the advantage of reduction of taxes/duties shall be passed onto the Purchaser and no benefit of increase will be permitted to the Supplier.

3.2 STANDARDS

The goods supplied under the contract shall conform to the standards mentioned in the Technical Specifications.

3.3 PATENT RIGHTS

The Supplier shall indemnify the Purchaser against all third party actions/claims of infringement of patent, trademark or industrial design rights arising from the use of goods or any part thereof.

3.4 PERFORMANCE SECURITY

3.4.1 Within 10 days of the Supplier's receipt of Letter of Intent (LOI)/P.O., the Supplier shall furnish a Performance Security for the amount of 10% of the contract/P.O value.

3.4.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the contract.

3.4.3 The Performance Bond shall be in the form of Bank Guarantee issued by a Scheduled Bank situated in India and in the form provided by TCIL.

3.4.4 The Performance Bond will be discharged by the Purchaser after completion of the Supplier's obligations including any warranty obligations under the contract.

3.4.5 As regards validity of PBG, please refer to Special Conditions of the contract (Section-4).

3.5 INSPECTION AND TESTS

3.5.1 The Purchaser or its representatives or ultimate client shall have the right to inspect and test the goods for their conformity to the specifications. The Purchaser may also appoint an agency for this purpose. The technical specifications shall specify what inspection and tests the Purchaser requires and where they are to be conducted. Where the Purchaser decides to conduct such tests on the premises of the Supplier, all reasonable facilities and assistance like testing instruments and other test gadgets including access to the drawings and production data shall be furnished to the Inspector free of costs. In case the tested goods fail to conform to the specifications, the Inspector may reject them and the Supplier shall either replace the rejected goods or make alteration necessary to meet the specifications requirements free of cost to the Purchaser.

- 3.5.2 Notwithstanding the pre-supply tests and inspections, the material on receipt in the Purchaser's premises shall also be tested and if any material or part thereof is found defective, the same shall be replaced free of cost to the Purchaser.

If any material before it is taken over is found defective or fails to fulfill the requirements of the contract, the Inspector shall give the Supplier notice setting forth details of such defects or failures and the Supplier shall make the material good or alter the same to make it comply with the requirements of the contract and in any case within a period not exceeding 2 months of the initial report. These replacements shall be made by the Supplier, free of the all charges, at the site(s).

- 3.5.3 As regards Inspecting Authority and other details please refer to Special Condition of the Contract (Section-4).

3.6 TRAINING (WHERE REQUIRED)

- 3.6.1 The Bidder shall provide training for installation and maintenance staff of the Purchaser free of cost, where required.
- 3.6.2 The Bidder shall specify in his bid the number of trainees, quantum of proposed training, pre-training qualifications required of the trainees and the duration of the proposed training required.
- 3.6.3 The Bidder shall provide all training materials and documents and aids.
- 3.6.4 Conduct of training of the Purchaser's personnel shall be at the suppliers' plant and/ or on-site in assembly start-up operation, maintenance and/or repair of the supplied goods.

3.7 WARRANTY

- 3.7.1 The Supplier shall give warranty that goods 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 for materials of the type ordered and shall perform in full conformity with the specifications and drawings. The Supplier shall be responsible for any defects that may develop under the conditions provided by the supplier and under proper use, arising from faulty materials, design or workmanship such as corrosion of the equipment, inadequate contact protection, deficiencies in circuit design and or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect goods are faulty. This warrantee shall survive inspection or payment for, and acceptance of goods, but shall expire except in respect of complaints notified prior to such date 12 months after the goods have been taken over.

However the warranty period specified, if any, in the Special Condition of Contract (Section – 4) the same shall rule.

- 3.7.2 If it becomes necessary for the supplier to replace or renew any defective portion/portions of the equipment under this clause, the provisions of the clause shall apply to the portion/portions of equipment's replaced or renewed or until the end of the above-mentioned period of twelve months, whichever may be later. If any defect is not remedied within a reasonable time, the Purchaser may proceed to get the work done at the Supplier's risk and expenses, but without prejudice to any other rights which the Purchaser may have against the Supplier in respect of such defects.
- 3.7.3 Replacement under warranty clause shall be made by the Supplier free of all charges at site including freight, insurance and other incidental charges.

3.8 CHANGE ORDERS

- 3.8.1 The Purchaser may at any time by written order given to the Supplier make changes within the general scope of the contract in any one or more of the following:-
- a) Drawings, designs or specifications where goods to be furnished under the contract are to be specifically manufactured for the Purchaser.
 - b) Method of transportation or packing.
 - c) Place of delivery.
 - d) Services to be provided by the supplier.
- 3.8.2 If any such change causes an increase or decrease in the cost or the time required for the execution of the contractor, an equitable adjustment shall be made in the contract price or delivery schedule or both and the contract shall accordingly be amended.

3.9 SUB-LETTING

The Bidder cannot assign or transfer and sub-contract its interest/ obligations under the contract without prior written permission of the Purchaser.

3.10 LIQUIDATED DAMAGES

- 3.10.1 The date of the delivery of the goods stipulated in the acceptance of tender should be deemed to be the essence of the contract and the delivery must be completed not later than the dates specified therein. Extension in delivery period will not be given except in exceptional circumstances. Should, however, deliveries be made after expiry of the contract delivery period and accepted by the consignee, such deliveries will not deprive the Purchaser of the right to recover Liquidated Damages.
- 3.10.2 In case the Supplier fails to supply the material against the order, the material shall be procured from other suppliers at the cost and risk of the Supplier and the excess money will be recovered from any dues of the party.
- 3.10.3 For late supplies, as liquidated damages, a sum equal to 0.5% of the price of any goods not delivered or total order value in case where part delivery is of no use to a Purchaser, for a week or part of a week subject to maximum limit of 5% of the total order will be recovered from the Supplier. The Purchaser also reserves the right to cancel the order in such cases and forfeit the EMD/Performance Bank Guarantee and may also debar the Supplier for future purchases.

3.10.4 LD can be recovered from any dues of the Supplier.

However the Liquidated Damages specified, if any, in the Special Condition of Contract (Section – 4) the same shall rule.

3.11 ARBITRATION

In case of Foreign Bidders :

3.11.1 Any dispute or differences arising out of the contract which cannot be amicably settled between the supplier and the purchaser shall be decided as per arbitration rules of International Chamber of Commerce, Geneva. For arbitration, the venue shall be Geneva.

In case of indigenous Bidders:

3.11.2 In the event of any dispute arising between TCIL and the Supplier in any matter covered by this contract or arising directly or indirectly therefrom or connected or concerned with the said contract in any manner of the implementation of any terms and conditions of the said contract, the matter shall be referred to the Chairman & Managing Director, TCIL who may himself act as sole arbitrator or may name as sole arbitrator an officer of TCIL notwithstanding the fact that such officer has been directly or indirectly associated with this contract and the provisions of the Indian Arbitration Conciliation Act, 1996 shall apply to such arbitration. The supplier expressly agrees that the arbitration proceedings shall be held at New Delhi.

3.11.3 The proceedings of arbitration shall be in English language:

3.11.4 In case any supplier wants to take the dispute to a court of law after arbitration award as aforesaid, it is clearly understood that only courts in Delhi shall have the Jurisdiction.

3.11.5 In case of Public Sector Undertaking/Government Departments

In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts with any Public Sector Undertaking / Government Department, 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 shall not 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.

3.12 RISK PURCHASE

3.12.1 In the event of Supplier's failure to execute the contract to the satisfaction of the Purchaser, the Purchaser reserves the right :

- (a) to reject any part of the Contract executed and withhold payment for such portion of the Contract till such time the defects are rectified to the satisfaction of the Purchaser.
- (b) to terminate the Contract by giving 2 weeks notice in writing without assigning any reason and to get the Contract executed by other agency at the risk and cost of the Supplier.

3.13 APPLICABLE LAWS

This contract shall be interpreted, construed and governed by the laws of the Republic of India and the parties hereby submit to the exclusive jurisdiction of the Court and to all Courts having jurisdiction in appeal therefrom.

Any dispute in relation to the contract shall be submitted to the appropriate Court of the Republic of India for determination. The parties to the contract shall continue to fulfill their respective obligations under the contract during the currency of the contract pending the final decision of the Court.

3.14 GENERAL LIEN

Whenever under this contract any sum of money is recoverable from and payable by the Supplier, the Company shall be entitled to recover such sum by appropriating in part or in whole the security deposit of the Supplier, if a security is taken from the Supplier. In the event of the Security being insufficient or if no security has been taken from the Supplier, the balance or the total sum recoverable, as may be, shall be deducted from any sum due to the Supplier or which at any time thereafter may become due to the Supplier under this or any other contract with the Company. Should this sum be not sufficient to cover the full amount recoverable, the Supplier shall pay to the Company on demand the remaining balance due.

3.15 PACKING

The supplier shall ensure that the Goods/Equipment is securely and adequately packed to ensure safe arrival at the destination fully withstanding all hazards such as rough handling etc. during transit.

3.16 REPLACEMENT OF DEFECTIVE EQUIPMENT

3.16.1 If any equipment or any part thereof, is found defective or fails to meet the requirements of the contract before it is accepted TCIL shall give the Supplier a notice setting forth details of such defects or failures and the Supplier shall forthwith arrange to set right the defective equipment or replace the same by the good one to make it comply with the requirements of the contract. This in any case shall be completed within a period not

exceeding one month from the date of the initial report pointing out the defects. The replacement or rectification shall be made at site by the Supplier free of cost. Should the Supplier fail to do the needful within this stipulated time frame, the purchaser reserves the right to reject the equipment in full or in part and get it replaced at the cost of the Supplier. The cost of any such replacement made by the Purchaser shall be deducted from the amount payable to the Supplier against this purchase order.

- 3.16.2 If any equipment or part thereof is lost or rendered defective during transit, pending settlement of the insurance claim, fresh order shall be placed on the Supplier for such loss or defective equipment and the Supplier shall arrange to supply the same within three months of such order at the same prices and on the same general terms and conditions as mentioned in this purchase order.

3.17 FORCE MAJEURE

If any time, during the continuance of this contract, the performance in whole or in part by either party under obligation as per this contract is prevented or delayed by reasons of any war or hostility, act of the public enemy, civil commotion, sabotage, fire, flood, explosion, epidemic, quarantine restrictions, strike, lockout or acts of God (hereinafter referred to “eventuality”), provided notice of happening of any such eventuality is given by either party to the other within 21 days of the date of occurrence thereof, neither party shall be reason of such an “eventuality” be entitled to terminate this contract nor shall either party have any claim or damages against the other in respect of such non-performance or delay in performance and deliveries under the contract. The contract shall be resumed as soon as practicable after such “eventuality” has come to an end or ceased to exist. In case of any dispute, the decision of CMD, TCIL, shall be final and conclusive, provided further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such eventuality for a period exceeding 60 days, either party may at its option, terminate the contract. Provided also that if the contract is terminated under this clause the Purchaser shall be at liberty to take over from the Supplier at a price to be fixed by the Purchaser, which shall be final, all unused, undamaged and acceptable materials, bought out components and other stores in the course of manufacture which may be in the possession of the Supplier at the time of such termination, or such portion thereof as the Purchaser may deem fit except such material, as the Supplier may, with the concurrence of the Purchaser, elect to retain.

3.18 TERMINATION FOR DEFAULT

- 3.18.1 The Purchaser, may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Supplier, terminate this contract in whole or in part.
- a) if the supplier fails to deliver any or all the goods within the time period (s) specified in the contract, or any extension thereof granted by the Purchaser .
 - b) if the Supplier fails to perform any other obligation(s) under the contract; and
 - c) if the Supplier, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.
 - d) On a notice period of 30 days.

3.18.2 In the event the Purchaser terminates the contract in whole or in part pursuant to above para the Purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the Supplier shall be liable to the Purchaser for any excess cost for such similar goods. However, the Supplier shall continue the performance of the contract to the extent not terminated.

3.19 TERMINATION FOR INSOLVENCY

The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the supplier if the supplier becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or effect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

3.20 ADD-ON ORDER

TCIL reserves the right to place Add-on order for additional quantity upto 25% of the original quantity at the same rate and terms & conditions of the purchase order.

- END OF SECTION 3 -

SECTION – 4

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

SPECIAL CONDITIONS OF THE CONTRACT

- 4.1 PRICE BASIS
- 4.2 PAYMENT TERMS
- 4.3 SALE IN TRANSIT
- 4.4 VALIDITY OF OFFER
- 4.5 PERFORMANCE BANK GUARANTEE (PBG)
- 4.6 PAYING AUTHORITY
- 4.7 CONSIGNEE
- 4.8 WARRANTY
- 4.9 DELIVERY PERIOD
- 4.10 LIQUIDATED DAMAGES (LD)
- 4.11 INSPECTION/TESTING OF RAW MATERIALS
- 4.12 QUANTITY VARIATION CLAUSE

4.1 PRICE BASIS

CIF Delhi/ New Delhi / NCR site basis inclusive of Excise Duty, CST, VAT/D-VAT, Freight, Octroi/ Entry Tax and other levies including transit insurance. The break up taxes and levies should also be provided. Prices to remain firm and fixed during the supply period.

Form C shall be issued by TCIL to the supplier and the supplier in- turn shall issue Form E 1, in case supply is under CST.

Item wise Financial evaluation will be done based on total CIF Price inclusive of all taxes. PO can be issued to different bidders for different items as listed in BOQ.

4.2 PAYMENT TERMS

- a) 60% on successful completion of inspection, testing of the materials/items and on submission of the following documents:
- (i) Supplier's Invoice
 - (ii) Manufacturer's Certificate of Quality
 - (iii) Insurance Policy / Certificate for 125% of P.O. value (3 copies)
 - (iv) *Manufacturers/ Contractors guarantee certificate of quality*
 - (v) Material Pre Dispatch Inspection Certificate from TCIL/ or its nominated agency
 - (vi) Test Certificates.
 - (vii) Warranty certificate
 - (viii) Certificate from TCIL that PBG has been received in prescribed format
 - (ix) *Detailed packing list (6 copies) identifying contents of each consignment*
 - (x) *Material Inspection Clearance Certificate (MICC) for dispatch issued by POWERGRID.*
 - (xi) Certificate from TCIL that material has been received in good condition.
 - (xii) Certificate of Origin issued by Chamber of Commerce
- b) 40% shall be paid on successful completion of Site Acceptance test or within 30 days of Operational Acceptance (on successful completion of system availability tests) and proof of submission of the required no of reproducible, O&M manuals, approved drawings, data sheets, test reports, pamphlets and manual of spares, maintenance & testing equipment etc. as per bidding documents and issuance of Taking Over Certificate.

4.3. SALE IN TRANSIT

Form 'C' shall be issued by TCIL to the Supplier and the Supplier in-turn shall issue Form 'E-1' in case of supply under CST.

4.4 VALIDITY OF OFFER

The offer shall be valid for a period of 180 days from the date of opening of tender. Within that period, the bidder cannot withdraw his offer subject to the period being extended further, if required, by mutual agreement from time to time.

4.5. PERFORMANCE BANK GUARANTEE (PBG)

The supplier shall submit within 10 days from the date of Purchase Order a Performance Bank Guarantee for a value of 10% of the total P.O. value issued through Indian Scheduled Bank from its Delhi Branch valid to cover the period of warranty.

4.6 PAYING AUTHORITY

Accounts Officer (F&A), North/ NE,
Telecommunications Consultants India Limited
Seventh Floor, TCIL Bhawan, Greater Kailash-I,
New Delhi 110048, India

4.7 CONSIGNEE

PGCIL, New Delhi.
However, billing/tax invoice to be raised in favour of TCIL, New Delhi.

4.8 WARRANTY

Warranty shall be 24 months from the date of supply/acceptance of the equipment/material.

4.9 DELIVERY PERIOD

Within 8 weeks from the date of issue of PO.

4.10 LIQUIDATED DAMAGES

Delay will be calculated w.r.t delivery at Consignee Address. 2% of delayed material per week or part thereof subject to maximum of 10% of total P.O value. In case part supply is of no use, 2% of total P.O value per week or part thereof subject to maximum of 10% of total P.O value

4.11 INSPECTION/TESTING OF MATERIALS

Pre dispatch inspection by TCIL/PGCIL or its nominated agency. Supplier will provide all necessary equipments, test and measuring instruments to carry out inspection.

4.12 QUANTITY VARIATION CLAUSE

±30%.

- END OF SECTION 4 -

SECTION – 5

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

BILL OF QUANTITY & PRICE BID SCHEDULE

Sl. No.	Item Description	Make/ Model	Quantity	Ex- Factory Price in INR. (Basic Unit Price exclusive of all levies & charges)		Excise Duty		CST against Form 'C'/ VAT		Freight		Any other levy/charges/Packing, Forwarding & Transit Insurance charges	Discount	Unit Price inclusive of all levies & charges less discount [4+6+8+10+11-12]	Total Price inclusive of all levies & charges (3 X 13)	Excise/Custom Tariff Head
				%	Amount	%	Amount	%	Amount							
1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	
1	SDH Analyser (upto STM 1)	ACTERNA (JDSU) Make & Model No. ANT- 20 or better	1 No.													
2	Transmission Impairment Measurement System (TMS)	Trend Communications Make & Model No. ALT- 2000 or better	1 No.													
3	Optical Power Meter	Anritsu Make & Model No. MW 96002A or better	1 No.													
4	Laser source		1 No.													

- END OF SECTION 5 -

SECTION – 6

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

TECHNICAL SPECIFICATIONS OF TEST INSTRUMENT

Technical Specification for **SDH Analyzer** has been attached separately to this tender. (Total No. of Pages = 7)

Technical Specification is for **Optical Power Meter & Light Laser Source** have been attached separately to this tender. (Total No. of Pages = 2)

Technical Specification for **Transmission Impairment Measurement System** has been attached separately to this tender. (Total No. of Pages = 11)

- END OF SECTION 6 -

SECTION - 7

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

BID BOND/(EMD) FORMAT

Whereas (hereinafter called “the Bidder”) has submitted its bid dated For the supply of Vide Tender No. dated KNOW ALL MEN by these presents that WE OF Having our registered office at (hereinafter called “the Bank”) are bound unto Telecommunications Consultants India Limited (hereinafter called “the Purchaser”) in the sum of Rs. for which payment will and truly to be made of the said Purchaser, the Bank binds itself, its successors and assigns by these present.

THE CONDITIONS of the obligation are:

1. If the Bidder withdraws his bid during the period of bid validity specified by the Bidder on the Bid form or
2. If the Bidder, having been notified of the acceptance of his bid by the Purchaser during the period of bid validity
 - (a) fails or refuses to execute the Contract, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the instructions to Bidders.

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the purchaser having to substantiate its demand, provided that in its demand, the purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including THIRTY (30) days after the Period of bid validity and any demand in respect thereof should reach the Bank not later than the specified date/dates.

Signature of the Bank Authority.

Name

Signed in Capacity of

Name & Signature of witness

Full address of Branch

Address of witness

Tel No. of Branch

Fax No. of Branch

- END OF SECTION 7 -

SECTION- 8

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

PERFORMANCE BANK GUARANTEE (FORMAT)

(To be issued by Delhi Branch of the Bank)

**M/s Telecommunications Consultants India Ltd.,
TCIL Bhawan, Greater Kailash-I
New Delhi – 110 048 (INDIA)**

(With due stamp duty if applicable)

OUR LETTER OF GUARANTEE No. : _____

In consideration of TELECOMMUNICATIONS CONSULTANTS INDIA LIMITED, having its office at TCIL Bhawan, Greater Kailash-I, New Delhi – 110 048 (INDIA) (hereinafter referred to as “TCIL” which expression shall unless repugnant to the content or meaning thereof include all its successors, administrators and executors) and having entered into an agreement dated _____/issued Purchase Order No. _____ dated _____ with/on M/s. _____ (hereinafter referred to as “The Supplier” which expression unless repugnant to the content or meaning thereof, shall include all the successors, administrators, and executors).

WHEREAS the Supplier having unequivocally accepted to supply the materials as per terms and conditions given in the Agreement dated _____ /Purchase Order No. _____ dated _____ and TCIL having agreed that the Supplier shall furnish to TCIL a Performance Guarantee for the faithful performance of the entire contract, to the extent of 10% (ten percent) of the value of the Purchase Order i.e. for _____.

We, _____ (“The Bank”) which shall include OUR successors, administrators and executors herewith establish an irrevocable Letter of Guarantee No. _____ in your favour for account of _____ (The Supplier) in cover of performance guarantee in accordance with the terms and conditions of the Agreement/Purchase Order.

Hereby, we undertake to pay upto but not exceeding _____ (say _____ only) upon receipt by us of your first written demand accompanied by your declaration stating that the amount claimed is due by reason of the Supplier having failed to perform the Agreement and despite any contestation on the part of above named Supplier.

This Letter of Guarantee will expire on _____ including 30 days of claim period and any claims made hereunder must be received by us on or before expiry date after which date this Letter of Guarantee will become of no effect whatsoever whether returned to us or not.

**Authorized Signature
Manager
Seal of Bank**

- END OF SECTION 8 -

SECTION - 9

Tender No.: TCIL/15/1303/1/11-MM/18E

17.06.2011

INSPECTION, TESTING, TRAINING, SUPPORT SERVICES AND DOCUMENTATION

This Section describes the specific requirements for Inspection, Testing, Training, support services and documentation requirements of the Fibre Optic Communication System Package.

10.1 General

All materials furnished and all work performed under this Contract shall be inspected and tested. Deliverables shall not be shipped until all required inspections and tests have been completed, and all deficiencies have been corrected to comply with this Specification and approved for shipment by the Employer.

The entire cost of testing for factory & site acceptance, routine tests, production tests and other test during manufacture & site activities specified herein shall be treated as included in the quoted unit price of materials, except for the expenses of Inspector/Employer's representative.

Should any inspections or tests indicate that specific item does not meet Specification requirements, the appropriate items shall be replaced, upgraded, or added by the Contractor as necessary to correct the noted deficiencies at no cost to the Employer/Owner. After correction of a deficiency, all necessary retests shall be performed to verify the effectiveness of the corrective action.

The test shall be considered complete when (a) when all variances have been resolved (b) all the test records have been submitted (c) Employer acknowledges in writing the successful completion of the test.

10.2 Inspection

Access to the Contractor's facilities while manufacturing and testing are taking place, and to any facility where hardware/software is being produced for Employer shall be available to Employer/Owner representatives. The Contractor shall provide to Employer/Owner representatives sufficient facilities, equipment, and documentation necessary to complete all inspections and to verify that the equipment is being fabricated and maintained in accordance with the Specification. Inspection rights shall apply to the Contractor's facilities and to subcontractor facilities where equipment is being manufactured.

Inspections will be performed by Employer/Owner, which will include visual examination of hardware, enclosure cable dressings, and equipment and cable labeling. Contractor documentation will also be examined to verify that it adequately identifies and describes all wiring, hardware and spare parts. Access to inspect the Contractor's hardware quality assurance standards, procedures, and records that are applicable to the facilities shall be provided to Employer/Owner.

10.2.1 Inspection Certificate

The Contractor shall give the Employer two weeks in case of domestic supplies and six weeks in case of foreign supplies written notice of any material being ready for testing. Such tests shall be to the Contractor's account except for the expenses of the Inspector. The Employer, unless witnessing of the tests is waived, will attend such tests on the scheduled date for which Employer has been so notified or on a mutually agreed alternative date.

The Employer shall, within fourteen (14) days from the date of inspection as defined herein, give notice in writing to the Contractor of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objections and shall make the modifications that may be necessary to meet said objections. When the factory tests have been completed successfully at the Contractor's or Sub-contractor's works, the Employer shall issue a certificate to this effect within fourteen (14) days after completion of tests but if the tests are not witnessed by the Employer, the certificate shall be issued within fourteen (14) days of receipt of the Contractor's Test Certificate by the Employer. The completion of these tests or the issue of the certificates shall not bind the Employer to accept the equipment should it, on further tests after erection, be found not to comply with the Contract.

In cases where the Contract provides for tests, whether at the premises or works of the Contractor or of any Sub-contractor, the Contractor except where otherwise specified shall provide free of charge items such as labour, materials, electricity, fuel, water stores, apparatus and instruments, as may be reasonably demanded by the Employer or his authorized representative to carry out effectively such tests of the equipment in accordance with the Contract and shall provide facilities to the Employer or his authorized representative to accomplish testing.

The inspection by Employer and issue of Inspection Certificate thereon, shall in no way limit the liabilities and responsibilities of the Contractor in respect of the agreed Quality Assurance Program forming a part of the Contract.

The Contractor shall keep the Employer informed in advance of the time of starting of the progress of manufacture of material in its various stages so that arrangements can be made for inspection.

Record of routine test reports shall be maintained by the Contractor at his works for periodic inspection by the Employer's/Owner's representative.

Certificates of manufacturing tests shall be maintained by the Contractor and produced for verification as and when desired by the Employer. No material shall be dispatched from its point of manufacture until it has been satisfactorily inspected and tested. Testing shall always be carried out while the inspection may be waived off by the Employer in writing only.

However, such inspection by the Employer's/Owner's representative(s) shall not relieve the Contractor from the responsibility for furnishing material, software, and equipment to conform to the requirements of the Contract; nor invalidate any claim which the Employer may make because of defective or unsatisfactory material, software or equipment.

10.3 Test Plans and Procedures

Test plans for both factory and field tests shall be provided by the Contractor to ensure that each test is comprehensive and verifies all the features of the equipment are tested. The test plans for factory and field tests shall be submitted for Employer approval before the start of testing.

The contractor shall prepare detail testing procedure in line to specification and submit for employer's approval. The procedure shall be modular to the extent possible, which shall facilitate the completion of the testing in the least possible time.

10.3.1 Test Records

The complete record of all factory and field acceptance tests results shall be maintained by the Contractor. The records shall be maintained in a logical form and shall contain all the relevant information. The test reports shall be signed by the testing engineer and the engineer witnessing the tests.

10.3.2 Reporting of Variance

A variance report shall be prepared by either Employer or Contractor personnel each time a deviation from specification requirements is detected during inspection or testing. All such variances shall be closed in mutually agreed manner.

However, at any stage if employer feels that quality of variances calls for suspension of the testing the testing shall be halted till satisfactory resolution of variances, which may involve retesting also.

10.3.3 Test Periods Defined

The terminology used in bidding documents and their correlation with the tests requirements described within this section is as follows:

a. Pre-Commissioning & Commissioning Period - The Site Acceptance Test (SAT)

b. Operational Acceptance - Successful completion of SAT

The Site Acceptance Test (SAT) requirements are specified in the relevant sections. The successful completion of SAT will lead to Operational acceptance

10.4 Testing Requirements

Following are the requirements of testing for Fibre Optic Communication system:

1. Type Testing
2. Factory Acceptance Testing
3. Site Acceptance testing

10.5 Type Testing

"Type Tests" shall be defined as those tests which are to be carried out to prove the design, process of manufacture and general conformity of the materials to this Specification.

Type Testing shall comply with the following:

- (a) The Contractor shall submit, within 30 days of Contract Award, copies of test reports for all of the Type Tests that are specified in the specifications and that have previously been performed. These reports may be accepted by the Employer only if they apply to materials and equipment that are essentially identical to those due to be delivered under the Contract and only if test procedures and parameter values are identical to those specified in this specifications carried out at accredited labs and witnessed by third party / customer's representatives
- (b) Type Tests shall be performed for all equipment types for which report is not provided for the tests mentioned in the Technical Specification. In this case type testing shall be carried out by the Contractor and no payment shall be made.
- (c) If the reports are submitted for the specified tests, however if it is determined by the Employer that the report provided is not acceptable, the same shall be carried out by the Contractor again. The bidder shall quote testing charges for each type test individually and payment shall be made for successful tests accordingly.
- (d) Type Tests shall be certified or performed by reputed laboratories using material and equipment data sheets and test procedures that have been approved by the Employer. The test procedures shall be formatted as defined in the technical specifications and shall include a complete list of the applicable reference standards and submitted for Employer approval at least four (4) weeks before commencement of test(s). The Contractor shall provide the Employer at least 30 days written notice of the planned commencement of each type test.
- (e) The Contractor shall provide a detailed schedule for performing all specified type tests. These tests shall be performed in the presence of a representative of the Employer.
- (f) Testing charges for all the type tests listed in the specifications shall be indicated separately for each item (excluding expenses of Inspector/ Employer's representative) in the prescribed schedule of the bidding document. The total amount of these charges will be considered in the bid evaluation process.
- (g) The Contractor shall ensure that all type tests can be completed within the time schedule offered in his Technical Proposal.
- (h) In case of failure during any type test, the Supplier is either required to manufacture a fresh sample lot and repeat all type tests successfully or repeat that particular type tests at least three times successfully on the samples selected from the already manufactured lot at his own expenses. In case a fresh lot is manufactured for testing then the lot already manufactured shall be rejected.

8.5.1 Type Test Samples

The Contractor shall supply equipment/material for sample selection only after the Quality Assurance Plan has been approved by the Employer. The sample material shall be manufactured strictly in accordance with the approved Quality Assurance Plan. The Contractor shall submit for Employer approval, the type test sample selection procedure. The selection process for conducting the type tests shall ensure that samples are selected at random. For optical fibres/ Fibre Optic cables/PLB HDPE pipe, at least three reels/drums of each type of fibre/cable/PLB HDPE pipe proposed shall be offered for selection, samples shall be selected randomly from one or more of the reels/drums. For telecom equipment and Joint box at least three samples of each type proposed shall be offered for selection out of which one sample shall be selected. The type approval certificate shall clearly indicate the type/grade/source of HDPE raw material, and the construction of the pipe i.e. two layer or homogenous. Bulk manufacture and supply of the above materials shall start only after issue of type approval. List of tests and Procedures for type testing for specific items are described in relevant section of technical specifications.

8.6 Factory Acceptance Tests

Factory acceptance tests shall be conducted on randomly selected final assemblies of all equipment to be supplied. Visual inspection shall be carried out on 100% basis for all the equipment/items offered. Factory acceptance testing shall be carried out on SDH equipment, NMS, Underground fibre optic cable, **Joint box**, PLB HDPE pipe, FODP and all other items for which price has been identified separately in the Bid Price Schedule.

Equipment/Material shall not be dispatched to the Employer until required factory tests are completed satisfactorily, all variances are resolved, full test documentation has been delivered to the Employer, and the Employer has issued Material Inspection & Clearance Certificate (MICC). Successful completion of the factory tests and the Employer approval to dispatch shall in no way constitute final acceptance of the system or any portion thereof. These tests shall be carried out in the presence of the Employer's/Owner's authorised representatives.

Factory acceptance tests shall not proceed without the prior delivery to and approval of all test documentation by the Employer.

The factory acceptance test shall demonstrate the technical characteristics of the fibre optic cable & equipment in relation to this specifications and approved drawings and documents. The factory acceptance tests for FODP and other items shall be proposed by the Contractor in accordance with technical specifications and Contractor's (including Sub-Contractor's /supplier's) standard FAT testing program. In general the FAT for other items shall include at least: Physical verification, demonstration of technical characteristics, various operational modes, functional interfaces, alarms and diagnostics etc. For Test equipment, FAT tests shall include supply of proper calibration certificates, demonstration of satisfactory performance, evidence of correct equipment configuration and manufacturer's final inspection certificate/report.

List of tests and Procedures for factory testing for specific items are described in relevant section of technical specifications.

8.6.1 Sampling for FAT

From each batch of equipment presented by the Contractor for Factory acceptance testing, the Employer shall select random sample(s) as described for specific items to be tested for acceptance in relevant sections of the technical specifications. Unless otherwise agreed, all required FAT tests in the approved FAT procedure shall be performed on all samples. The sampling rate for the Factory acceptance tests for telecom equipment shall be 10% of the batch size (minimum 1). The Sampling rate for the Factory acceptance tests shall be 10% of the batch size (minimum 2) for FO cable drums, FODPs, Joint box and other similar items. For PLB HDPE pipes, following sampling plan shall be followed.

Visual inspection and dimensional test shall be carried out on every length. All other test carried out as per sampling plan below:-

No. of pipes in the lot	Sample size
Up to 150	3
151 to 1200	5
1201 and 3500	8
3501 and above	12

In case any of the selected samples fail, the failed sample is rejected and additional 20% samples shall be selected randomly and tested. In case any sample from the additional 20% also fails the entire batch may be rejected.

Since FAT testing provides a measure of assurance that the Quality Control objectives are being met during all phases of production, the Employer reserves the right to require the Contractor to investigate and report on the cause of FAT failures and to suspend further testing/ approvals until such a report is made and remedial actions taken, as applicable.

8.6.2 Production Testing

Production testing shall mean those tests which are to be carried out during the process of production by the Contractor to ensure the desired quality of end product to be supplied by him. The production tests to be carried out at each stage of production shall be based on the Contractor's standard quality assurance procedures. The production tests to be carried out shall be listed in the Manufacturing Quality Plan (MQP), along with information such as sampling frequency, applicable standards, acceptance criteria etc.

The production tests would normally not be witnessed by the Employer. However, the Employer reserves the right to do so or inspect the production testing records in accordance with Inspection rights specified for this contract.

8.7 Site Acceptance Tests

The Contractor shall be responsible for carrying out site tests and inspection for all equipment supplied in this contract as required by the Employer. All equipment shall be tested on site under the conditions in which it will normally operate. Site acceptance testing shall be carried out for underground fibre optic cable, joint box, PLB HDPE pipe, FODP, SDH equipment, TMN etc. The tests shall be exhaustive and shall demonstrate that the overall performance of the contract works satisfies every requirement specified.

The minimum site acceptance testing requirements for SDH equipment, NMS Underground fibre optic cable, **Joint box**, PLB HDPE pipe, and FODP are described in relevant sections of the technical specifications. This testing shall be supplemented by the Contractor's standard installation testing program, which shall be in accordance with his quality plan(s). The Contractor shall be responsible for the submission of all equipment supplied in this contract for site tests and inspection as required by the Employer.

8.8 Support Services

The Contractor shall ensure the availability of the service, spares and expansion parts for the supplied equipments for a minimum period of 15 years from operational acceptance by the Employer or 7 years from the date of withdrawal from production whichever is earlier. However the termination of production shall not occur prior to Operational Acceptance of the system by the Employer.

8.9 Training Requirements

This section describes general requirements that apply to all training courses. Appendix-B provides the training requirements. The Contractor shall submit the training proposal along with the bid. The training content, schedule and location shall be finalised during project executive.

- (a) Training will be conducted by Contractors personnel, who are experienced instructors and speak understandable English.
- (b) All necessary training materials shall be provided by the Contractor. Each trainee shall receive individual copies of all technical manuals and all other documents used for training.
- (c) Class materials, including the documents sent before the training courses as well as class handouts, shall become the property of Employer. Employer reserves the right to copy such materials, but for in-house training and use only.
- (d) Hands-on training shall utilize equipment similar to that being supplied under the contract.
- (e) For all training courses, the travel and per-diem expenses will be borne by the owner.
- (f) The Contractor shall quote training prices individually for each of the courses indicated in appendices.
- (g) Employer will have the option to cancel any or all training courses. In the case of cancellation, the rate quoted against the respective course will not be paid to the Contractor.

8.9.1 FO Communication System Training Course Requirements

- (i) This training shall provide a functional description of the FO Cabling system, communication equipment, sub-systems and network, and a discussion of the fail over in the network. The training shall include an overview of the network configuration and indicate the functional responsibilities of all major subsystems including the network monitoring system hardware and software. High-level hardware configuration block diagrams and network/sub network block/flow diagrams shall be included to enhance the understanding of the overall capability incorporated into all network and sub network equipment.

- (ii) The installation & maintenance trainings shall enable the Owner to be self-sufficient in preventive & restorative maintenance of the respective communications subsystems purchased by the Employer. The training courses shall cover equipment installation, testing & commissioning, operation, interfaces and cabling between equipment, preventive maintenance, diagnostic tools and troubleshooting procedures, corrective maintenance, and expansion procedures for all equipment. The courses shall provide theoretical background and extensive hands on experience.

Courses shall include equipment adjustments, board-level troubleshooting and repair and, where appropriate, component-level troubleshooting and repair. Course participants shall operate actual equipment and diagnose and repair simulated failures.

The training shall focus on critical aspects associated with installation, testing & commissioning of fibre optic communication equipment. This shall include the state-of-the art techniques employed in laying, splicing & testing of fibre optic cable & terminal equipments etc. The owner's personnel shall be trained in such a way that the basic maintenance of terminal equipments & cable etc. can be carried out effectively.

- (iii) The Network Management training shall familiarize the Owner maintenance personnel with the concepts and techniques for configuring, programming, maintaining, and troubleshooting the Contractor supplied TMN and its associated database. The Network Management training course shall provide the course participants with hands-on experience using the actual system being supplied.
- (iv) Training aids for each course shall include the Operator's User Manual for each type of equipment. Operator training that is a standard part of the maintenance training will be applicable.

8.10 Mandatory Spare Parts

Appendices provide the Mandatory Spare Parts Requirements to be provided for Employer/Owner.

8.11 Recommended Spare Parts

In addition to the Mandatory Spares the bidder shall provide a list of "Recommended Spare Parts", which may be required over and above the spares listed in Mandatory Spare parts list (Vol II, appendices), to support system availabilities specified in this section, during a one year period. This list of spares shall be called the "Recommended Spare Parts List". The Recommended spare parts list shall not be considered for evaluation and may be included in the final scope of supply.

The unit as well as set prices shall be provided for each subsystem set item of the spare parts list in the appropriate Bid Price Schedule.

8.12 Test Equipment

Appendices provide the Mandatory test equipment to be provided. The Contractor shall provide in their bid, additionally recommended test equipment list necessary to support system availability. These lists shall include all relevant technical descriptions and recommended minimum quantities based upon the guidelines consistent with the telecommunications resource management hierarchy and continuing maintenance concept. The recommended test equipment shall not be considered for evaluation but may be included in the final scope of supply at the discretion of Employer

8.13 Miscellaneous Supplies

The Contractor shall provide all required consumable and non-consumable supplies necessary to support all installation and test activities through final operational acceptance.

8.14 System Maintenance

8.14.1 Defect Liability Period

The one year period commencing immediately after the operational acceptance is called the Defect liability Period. Operational Acceptance shall be given on successful completion of SAT. During this period, the Contractor shall replace or repair all defective parts and shall be responsible for maintaining an operational system to achieve the availability of 99.8% for subscriber to subscriber. The fibre optic cable outage (due to conditions not in control of the Contractor) shall not be considered in the availability calculations. The contractor maintenance engineer shall report to the site for restoration of the system within 6 hrs excluding travel time in case of complete break down of the link. Within four (4) months from Contract Award Date, the Contractor shall submit a comprehensive maintenance strategy for the maintenance of the system during the Defect Liability Period. For this period which commences immediately after operational acceptance, the actual outage frequency and the availability achieved during the period shall be calculated periodically, jointly by the Contractor and the Employer.

During the Defect Liability Period, the spare parts, test equipment and tools and tackles supplied by the Contractor to Employer under the present procurement including items in both the “Mandatory” and “Recommended” lists, shall be issued as required by the Contractor. Only these supplied items and no additional items, with the exception of general purpose toolkits, shall be used by the Contractor for all its testing and preventive & restorative maintenance activities.

If any additional test equipment or spare parts are required or found to be required, these additional items shall be provided by the Contractor, within a reasonable time, up to the expiry of the Defect liability Period, at no additional cost to Employer. Further, in such case the list of “recommended” spare parts and test equipment and tools & tackles shall be reviewed to identify further spares and test equipment requirement, which shall have to be provided by the Contractor at no additional cost to Employer. Since the spare parts shall be “issued for use”, by the end of the Defect Liability Period, the Contractor shall replenish the spare parts stock to the original level plus any additional spares required, found to be required or additionally identified as above.

All test equipment and tools & tackles issued to the Contractor shall be “issued for use” and shall be returned at the earliest in “as issued” condition.

8.14.2 Contractor’s Maintenance Responsibility for a period of five years after the Defect Liability Period

In addition to above, Owner/Employer may ask the Contractor to carry out “Maintenance” of the system (excl. fibre optic cable) including supply of spares for a period of five years after Defect Liability Period for ensuring the successful operation of the system. The Contractor shall be responsible for achieving the system availability and the response time mentioned above in clause 8.14.1. The bidder shall quote the Annual maintenance charges for five years after Defect Liability Period which shall be considered in the bid evaluation. Bidder shall submit the detailed procedure for achieving above in the bid.

8.15 Documentation

To ensure that the proposed systems conform to the specific provisions and general intent of the Specification, the Contractor shall submit documentation describing the systems to employer for review and approval. Further the Contractor shall also submit the drawings/documents for all the hardware & software required for site installation, testing and commissioning and thereafter operation of the system. The contractor shall obtain approval of Employer for the relevant document at each stage before proceeding for manufacturing, system development, factory testing, site testing, training etc. The schedule for submission/approval of each document shall be finalised during the discussions before placement of the contract, this schedule shall be in line to overall project schedule.

Each document shall be identified by a Contractor document number, the employer document number, and the employer purchase order number. Where a document is revised for any reason, each revision shall be indicated by a number, date, and description in a revision block along with an indication of official approval by the Contractor's project manager. Each revision of a document shall highlight all changes made since the previous revision.

The contractor shall submit two hard copies of each document/drawing for employer’s review and approval along with soft copy with each submission. After approval two sets of all the documents shall be submitted as final documentation, however, for site specific documents two sets of documents shall be provided for each site. Any changes observed during field implementation shall be incorporated in the as-built drawing and required sets of the same shall be submitted to Employer. In addition to paper copies all the documents shall also be provided on electronic media in two copies. In case any documentation requirement is specified in the relevant section the same shall apply for the equipment /system defined in that section. The contractor shall also supply two sets of User manuals/guides/O&M manuals/manufacture’s catalogues for all the hardware & software supplied under the contract which shall be in addition to the one set each at all the locations where the System has been installed. The user manual shall at minimum include the principle of operation, block diagrams, troubleshooting and diagnostic and maintenance procedures. Considering all the components of the project briefly the following documents/drawings shall be required under the project. The user manual shall be oriented towards system user and system deployed under the Project.

- 1) Survey report
- 2) System Functional Description Document
- 3) Data Requirement Sheets (DRS) & Drawings
- 4) Link budget calculations
- 5) Manufacturing Quality Plan & Field Quality Plan
- 6) Bill of Quantities
- 7) Test schedule
- 8) Type test procedures (Type test, FAT & SAT)
- 9) Test reports (Type test, FAT & SAT)
- 10) Equipment Manuals & Standard Documents
- 11) Software Licences
- 12) Installation drawings
- 13) Schematic drawing
- 14) Numbering, Marking, labelling Document
- 15) Channel Routing
- 16) Synchronisation Plan
- 17) Configuration Diagrams
- 18) TMN Description Document
- 19) Installation & jointing procedure for FO cable
- 20) As built drawing for cable of installation
- 21) Site Drawings
- 22) Training documents
- 23) Maintenance Philosophy & Procedures

- END OF SECTION 9 -