

BHARAT SANCHAR NIGAM LIMITED
(A Government of India Enterprise)
2nd Floor, Bharat Sanchar Bhawan, HC Mathur Lane,
Janpath, New Delhi- 110001

From: AGM (MMY)
To,
.....
2nd Floor, Broadband Section,
Bharat Sanchar Bhawan, HCM Lane,
Janpath, New Delhi – 110001.

No..... Dated: xx/xx/2013

Sub: - EOI Document for Rollout, Operation and Maintenance of Voice & data services over FTTH on Revenue Share basis.

EOI No. :

Please find enclosed the document in respect of above mentioned EOI which contains the following.

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If interested, kindly submit your offers by means of online bids only for Electronic E-Tendering at the portal detailed in 'Special Instructions to Bidders for E-Tendering' by 11:30 hours of XX-XX-2013(EOI closing date).

AGM (MMY)
Phone Number -
E-Mail:

Regd. Off.: BSNL ,Bharat Sanchar Bhawan, Janpath, New Delhi -110 001. Web:
www.bsnl.co.in

SECTION - 1

DETAILED NOTICE INVITING EXPRESSION OF INTEREST (EOI)

1. Introduction

- 1.1. On behalf of Chairman and Managing Director Bharat Sanchar Nigam Limited New Delhi, sealed EOI is invited from the Indian Companies under two stage bidding system (Techno-commercial bid & financial bid) through the e-Tendering process for Engaging firms for Rollout, Operation & Maintenance of Voice & Broadband Data services over FTTH on Revenue Share basis in 14 zones.

- 1.2. Bharat Sanchar Nigam Limited (BSNL), a Public Sector Undertaking of Government of India, is one of the largest telecom Service Provider in India having a countrywide presence with over 100 million customers and offer hosts of other services like Wire-line voice, GSM 2G/3G, CDMA, WiMAX Data communication, National long distance, International Long Distance, Internet, Broad band, Multiplay, Leased Line, etc. It is also the largest ISP offering broadband services on ADSL 2+ to its customers. BSNL is currently operating across the nation except in Delhi and Mumbai.

2. EOI brief

- 2.1. BSNL is deploying Next Generation Play Access Network (FTTH) based on GPON and GEPON technology for provisioning of high speed Bandwidth and Broadband applications to home, business and enterprise customers. The service is being rolled out in around 161 cities, progressively (Annexure-I).

- 2.2. The services that are planned to be offered to the end customers are Broadband upto 100Mbps, High speed internet, Leased Line, VPN upto 100 Mbps, Voice, IPTV, Video on Demand and other content based services such as Video Surveillance etc. The targeted customers are high-end customers for both residential and business (enterprise) segments

- 2.3. For Rollout of FTTH services, BSNL has divided India in 14 zones for which separate financial bids are invited. BSNL intends to select firms for Rollout, Operation & Maintenance of Voice & data services over FTTH on Revenue Share basis. One firm can bid for one or more zones. Proposals are accordingly invited from interested Bidders. There shall be separate financial bid for each of the 14 zones. BSNL shall open and evaluate the financial bids of Techno-commercially responsive firms. After evaluation of financial proposals (bids), BSNL shall prepare a list of Bidders arranged in decreasing order of % revenue share offered to BSNL starting from the Highest (i.e. H1, H2, H3 and so on), for the purpose of awarding work. The evaluation of each of these 14 financial bids shall be done separately for deciding the ranking of H1, H2 bidder in respective zones. Further a firm shall not be awarded work in more than 7 zones. Detailed award of work criterion is mentioned in the EOI document.

- 2.4. The Bidder shall be responsible for assisting BSNL in rolling out its FTTH based Voice & Broadband data services along with Customer Acquisition, installation, Operation & maintenance spanning over more than 157 cities, as per the terms and conditions of this EOI. Bidder shall also be responsible for laying of last mile fiber,

EOI for Rollout, O&M of Voice & data services over FTTH on Revenue Share basis

Installation of Splitters, extension of fiber from the Splitter, carrying out internal fiber wiring in the Customer Premises as part of BSNL's FTTH deployment as per terms and conditions defined later in the EOI document.

2.5. **Grouping of cities into various zones:**

The details of cities and **Grouping of Circles for award of work** are given in **Table below**. Number of cities can vary (increase as well as decrease) and the same can be amended by the BSNL.

Name of Zone	BSNL Telecom (Territorial) Circles covered in the zone	City Name	Indicative Capacity*	EMD	PBG
Zone-1	Madhya Pradesh Chhattisgarh	Indore	3840		
		Bhopal	3200		
		Ujjain	1280		
		Rewa	960		
		Morena	640		
		Khargaoan	960		
		Chhattarpur	640		
		Khujraho	320		
		Dewas	960		
		Mandesaur	1280		
		Gwalior	2240		
		Jabalpur	1920		
		Sagar	960		
		Katni	320		
		Bhind	320		
		Seopur	320		
		Raipur	9280		
		Durg	6400		
		Bilaspur	640		
		Korba	640		
		Raigarh	640		
Ambikapur	320				
Jagaldpur	320				
Zone total			38400	60 lakh	1.5 Crore
zone-2	Gujarat	Ahmadabad	19200		
		Anand	640		
		Baroda(Vadodra)	2560		

		Mehsana	320		
		Kalol	320		
		Kadi	320		
		Patan	320		
		Morbi	320		
		Gondal	320		
		Dahej	320		
		Rajkot	640		
		Surat	2880		
		Zone total	28160	45 Lakh	1.1 crore
zone-3	Maharashtra	Pune	9280		
		Nagpur	8000		
		Amarawati	2880		
		Solapur	3200		
		Ahmadnagar	3200		
		Aurangabad	2240		
		Dhule	1280		
		Goa	4160		
		Kalyan	3840		
		Kolhapur	2880		
		Nasik	2560		
		Nanded	640		
		Sangli	320		
		Jalgoan	640		
		Miraj	320		
		Zone total	45440	70 Lakh	1.75 Crore
zone-4	Andhra Pradesh	Hydrabad	30400		
		Vijayawada	5120		
		Kakinara	320		
		Guntur	640		
		Adilabad	640		
		Anantpur	640		
		Eluru	640		
		Nellore	1280		
		Rajahmundry	640		
		Tirupathi	640		
		Visakhapatnam	2560		
		Warangal	640		

	Zone total		44160	70 Lakh	1.75 Crore
zone-5	Tamilnadu	Coimbatore	12480		
		Madurai	1280		
		Pondicherry	640		
		Salem	640		
		Trichy	1280		
		Vellore	640		
	Kerala	Ernakulam	16320		
		Kalikat	3840		
		Kannaur	2560		
		Trichur	4480		
Trivandrum		1920			
Zone total		46080	70 Lakh	1.75 Crore	
zone-6	Karnataka	Banglore R	46080		
		Banglore			
		Manglore	16000		
		Belgaum	640		
		Hubli& Dharwad	2560		
		Karwar	640		
		Mysore	2560		
		Raichur	640		
	Zone total		69120	1 Crore	2.5 Crore
zone-7	Chennai-TD	Chennai TD	36160		
		Kancheepuram	960		
		Tiruvallur	640		
	Zone total		37760	60 Lakh	1.5 Crore
zone-8	UP(W)	Noida, Greater NOIDA	21120		
		Meerut	5440		
		Mathura	1920		
		Muzzafar Nagar	1920		
		Aligarh	1920		
		Saharnpur	1920		
		Bareilly	1920		

		Agra	6400		
		Ghaziabad	7040		
		Muradabad	640		
	Uttaranchal	U.S. Nagar	640		
		Haridwar	640		
		Haldwani	640		
		Roorkee	640		
		Dehradun	2560		
		Zone total	55360	85 Lakh	2.1 Crore
	UP (E)	Lucknow	19200		
		Kanpur	10880		
		Farrukhabad	1280		
		Sultanpur	1280		
		Raibarelli	1280		
		Faizabad	1920		
		Azamgarh	1920		
		Mirzapur	1920		
		Allahabad	3200		
		Gorakhpur	3200		
		Jhansi	1280		
		Varanasi	3200		
		Zone total	50560	80 Lakh	2 Crore
	Haryana	Gurgaon	16640		
		Jind	640		
		Hissar	2560		
		Sirsa	1600		
		Rewari	1920		
		Rohtak	1280		
		Sonapat	1280		
		Amballa	1280		
		Yamuna Nagar	1280		
		Karnal	1280		
		Panipat	1280		
		Faridabad	14080		
		Zone total	45120	70 Lakh	1.75 Crore
zone-11	Rajasthan	Jaipur	35520		
		Ajmer	1280		

		Alwar	3840		
		Jodhpur	1920		
		Kota	1280		
		Udaipur	1280		
		Zone total	45120	70 Lakh	1.75 Crore
zone-12	Punjab	Chandigarh	16320		
		Jalandhar	20160		
		Amritsar	5120		
		Ferozapore	1920		
		Ludhiana	6400		
		Patiala &SSA	4800		
		Sangrur	2560		
	Himachal Pradesh	Simla	960		
		Solan	640		
		Nalagarh	320		
		Baddi	320		
		Barotiwala	320		
		Bilaspur	640		
		Jammu & Kashmr	Jammu	640	
		Sri Nagar	320		
	Zone total	61440	95 Lakh	2.35 Crore	
zone-13	Kol-TD	Kolkata	40640		
		Durgapur	640		
	West Bengal	Siliguri	640		
		Haldia	640		
		Asansol	640		
	Andaman & Nicobar	Port Blair	640		
	Assam	Gowahati	2880		
	North East-I	Agartalla	640		
	North East-I	Shilong	640		
	Zone total	48000	75 Lakh	1.85 Crore	
zone-14	Orissa	Bhubeneshwar	7360		
		Rourkele	640		
		Sambalpur	640		
	Bihar	Patna	17280		
	Jharkhand	Ranchi	12480		

		Bokaro	1280			
		Dhanbad	640			
		Jamshedpur	640			
		Zone total	40960	65 Lakh	1.6	Crore

Note: * BSNL reserves the right to divert the capacity from one city to other city depending on the demand and business requirements.

3. BSNL has decided to use process of e-tendering for inviting this EOI and thus the physical copy of the EOI document would not be sold.

4. Eligibility Requirement

4.1. The following criterion shall be met by the Bidder company who intend to participate in this EOI and only those Bidders who qualify the following conditions, need put in the proposal:

i. The Bidder firm shall be a company registered/incorporated in India under the Indian Companies Act, 1956.

ii. The Bidder shall have annual turnover of minimum INR 10 Crores (Rs Ten Crore) during last 3 financial years (i.e. 2009-2010, 2010-11 and 2011-12). Certified Copy of Audited Balance Sheet to be attached.

iii. The Bidder shall have got an experience of 50 Km laying of OFC OR micro-duct within the campus / building / customer premises after 1-04-09. Self certification with details of experience with address of places, location to be given.

iv. Bidder shall have the experience of maintenance of 1000 personal computers/laptops for at least last one year. Bidder shall submit self certificate along with the list of clients mentioning the number of PC/laptop being maintained as well as date of start of Maintenance Contract, for respective clients.

v. In case the bidder is not having the experience as mentioned at Para (iv) above, then the bid can be submitted through a legally bound consortium Format in the **Annexure- II)** with a firm who is having experience as at Para (iv) above. Bidder (lead member of Consortium) shall meet all other eligibility criterion on their own.

vi. Bidder shall have a valid ISO **9001**:2008 certificate.

vii. The Bidders shall submit necessary documentary proof showing that they meet the eligibility criteria along with their tender bid. All documents submitted will also be self attested by the Bidder.

5. As this EOI Document shall be following the e-Tendering Process, the Bidders may download the Detailed NIT along with Performa for Non Disclosure Agreement ("**NDA**") (**Annexure-V**) from the BSNL Web site [http:// bsnl.co.in](http://bsnl.co.in) following the "Link for E-tenders by BSNL" in the tender section from to

6. EOI Document shall be available for downloading only after the following:
- (i) Payment of Rs 8000/-(Rupees Eight thousand Only), which shall be non-refundable in the form of crossed demand draft, drawn on any scheduled bank in New Delhi, in favour of 'Accounts Officer (Cash), O/o BSNL Corporate Office, New Delhi'; and
 - (ii) Bidder is required to register compulsorily on the E-tender portal <https://www.tcil-india-electronictender.com> . Thereafter, upon payment of Rupees 8,000/- towards tender fee and submission of the NDA to AGM(MMY), 2nd Floor, Bharat Sanchar Bhawan, Janpath, New Delhi-1, the prospective Bidder will be authorized by MM cell, BSNL, to access/download the EOI document from the E-tendering portal.
 - (iii) Submission of Integrity Pact signed by BSNL and Bidder is mandatory.
7. **EMD/Bid Security:** The Bidder shall furnish the bid EMD of **as in the table below separately for each of the zone for which the bidder intends to put-in bid (Section 7(A):**

Amount of Bid Security	Zone 1: INR 60 lakh/- Zone 2: INR 45 lakh/- Zone 3: INR 70 lakh/- Zone 4: INR 70 lakh/- Zone5 : INR 70 lakh/- Zone6: INR 1 Crore/- Zone7 : INR 60 lakh/- Zone8 : INR 85 lakh/- Zone9 : INR 80 lakh/- Zone10 : INR 70 lakh/- Zone11 : INR 70 lakh/- Zone12 : INR 95 lakh/- Zone13 : INR 75 lakh/- Zone14 : INR 65 lakh/- Bid security is to be submitted separately for each of the 14 zone in which the bidder intends to bid. Bid security format details are in the Tender document. Bid security shall clearly indicate the name of the zone-1/zone-2/Zone-3/ zone-4..... for which it is meant for.

- 7.1. **EMB/Bid security may be submitted** in one of the following ways:
- a) Demand Draft/ Banker's cheque issued by a scheduled, Nationalized Indian bank's Delhi Branch drawn in favour of A.O. (Cash), BSNL C.O. Payable at Delhi.

- b) Bank Guarantee from a scheduled Nationalized Indian bank's Delhi Branch drawn in favour of 'DGM (MMT), **BSNL C.O. New Delhi**' which shall be valid for minimum **180 days** from the EOI opening date.
- 8.** The EOI document for participating in E-tender shall be available for downloading from **<https://www.tcil-india-electronictender.com>** after signing NDA in the enclosed format from..... **2013, 16:00 Hrs** onwards.
- 9.** Pre-bid conference will be arranged in the BSNL's premises approximately within 10 days of uploading of the EOI document, details of which will be duly informed.
- 10. Date & Time of Online Submission of EOI bid: xx/xx/2013 by 11:30 Hrs**

Note 1: In case the date of submission (opening) of bid is declared to be a holiday, the date of submission (opening) of bid will get shifted automatically to next working day at the same scheduled time. Any change in bid opening date due to any other unavoidable reason will be intimated to all the Bidders separately.

- 11. Online Opening of EOI Bids:** At **12:00** Hours of this EOI closing date i.e. **xx/xx/2013.**
- 12. Place of opening of EOI bids:**

BSNL has adopted e-Tendering process which offers a unique facility for 'Public Online Tender Opening Event (TOE)'. BSNL's EOI Opening Officers as well as authorized representatives of Bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. **Kindly refer clause 8 of Section 4 Part B of EOI document for further instructions.**

However, if required, authorized representatives of Bidders can attend the TOE at the Meeting Room, 2nd Floor, Bharat Sanchar Bhawan, Janpath, New Delhi, where BSNL's EOI Opening Officers shall be conducting Public Online Tender Opening Event (TOE).

- 13.** EOI bids received after due time & date shall not be accepted.
- 14.** CMD, BSNL reserves the right to accept or reject any or all EOI bids without assigning any reason. He is not bound to accept the highest bid.
- 15.** The Bidder shall furnish a declaration under his digital signature that no addition / deletion / corrections have been made in the downloaded EOI document being submitted and it is identical to the EOI document appearing on E- Tender Portal (<https://www.tcil-india-electronictender.com>)
- 16.** In case of any correction/addition/alteration/omission in the EOI document, the EOI bid shall be treated as non responsive and shall be rejected summarily.

Note 2: All documents submitted in the bid offer shall be preferably in English. In case the certificate viz experience, registration etc. is issued in any other language other than English, the Bidder shall attach an English translation of the same duly attested by the Bidder & the translator to be true copy in addition to the relevant certificate.

All computer generated documents shall be duly attested/ signed by the issuing organisation.
AGM (MMY)

Section- 2
EOI Information

1. **Type of EOI** : Two Stage-using Two Electronic Envelope System.

Note: The bids will be evaluated techno-commercially and financial bids of techno-commercially compliant Bidders only shall be opened.

2. **Bid Validity Period / Validity of bid Offer for acceptance by BSNL.** : **150 days** from the EOI opening date.

3. The EOI offer shall contain two envelopes viz. Techno-commercial envelope and financial envelope which will contain one set of the following documents only :

- a) Techno-commercial envelope shall contain Electronic Form-Technical with all relevant bid annexure of following, but not limited to, documents :
 - i. Copy of EMD/Bid Security instrument.
 - ii. Copy of proof of payment of Cost of the EOI documents i.e. EOI fee.
 - iii. Copy of Power of Attorney for signing EOI document.
 - iv. Certificate(s) showing fulfilment of the eligibility criteria(s) stated in Clause 6 of the Detailed NIT.
 - v. Documents stated in clause 10 of Section-4 Part A.
 - vi. Bidder's Profile & Questionnaire duly filled & signed (**section 8**).
 - vii. Undertaking & declaration in Performa duly filled & signed.
 - viii. EOI documents duly signed for having read it & accepted it.
 - ix. EOI/ Bid form duly filled & signed.
 - x. Integrity Pact.

Bidders are required to submit the EMD instrument, proof of payment of the cost of EOI document, Power of Attorney and Integrity Pact to BSNL offline on/before the due date and time of online opening of the EOI.

b) Financial envelope shall contain Electronic Form-Financial with:

- i) Tender/ Bid form duly filled & signed.
- ii) Electronic Form of Price Schedule (financial bid) with all relevant bid annexure.

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SECTION- 3

SCOPE OF WORK

1 Introduction

- 1.1 BSNL envisages providing quality Broadband and high speed Bandwidth services over FTTH to the customers' door-step with in a given Residential / Business complex in the area allotted to the BIDDER.
- 1.2 Through this EOI, BSNL shall finalize the Bidders {successful Bidder who has been awarded work is also referred hereafter as FTTH services partner (FSP), Terms "FSP" and "bidder" are also used interchangeably.} to assist BSNL in FTTH services Rollout including Customer acquisition, list mile OF cable laying, fibre/Ethernet cabling/wiring, CPE (HONT etc.)/Splitter installation, thereafter Operational & Maintenance of BSNL FTTH services at the premises of BSNL's customers on Revenue Share Basis. Such BSNL's Customers Residential / Business complex is also referred as **The Project** in this document.
- 1.3 All the BB services over FTTH to the subscribers shall be provided under the brand name of BSNL. These Broadband over FTTH Customers shall be owned by BSNL. Invoicing to these customers and revenue collection shall also be done by BSNL.
- 1.4 BSNL shall allot FTTH ONTs, splitters and its accessories to the Project. BSNL would provide backbone connectivity and OF cable with-in a distance of 500 meters from the building entry point/campus gate. Thereafter FSP shall be responsible for supply and installation of all items including but not limited to lead-in OF cable, Ethernet cable/customer end wiring and all related iron materials and fixtures etc at their own cost.
- 1.5 The customer premises equipments and wiring so installed by the BIDDER shall upon installation become an integral part of the basic telecom and broadband network and that the Services so provided by BSNL. The provision of such equipment would be within the purview of the services as defined under the terms and meanings assigned to them by DOT, TRAI and/or any other government/statutory body so legislated from time to time.
- 1.6 During the tenure of the contract the BSNL equipment and network for the project would be under maintenance custody of the BIDDER and the BIDDER would take enough care for safeguard of the equipment.
- 1.7 The FTTH equipment shall be used to provide all the services that the BSNL may choose to offer to the customers including but not limited to Basic Telephony, National & International Calling Services, Broadband Internet Access, Leased Line and Value Added Services that may be offered by BSNL on its own or through VAS providers.

2 Bidder's Role and responsibility

- 2.1 Bidder shall pro-actively market the BB and other services over FTTH, educating the customer on the usage / benefits of the service, tariff plans etc. Bidder shall identify

the potential buildings for the services and may also undertake the work in the anticipation of the demand.

- 2.2 The Bidder shall carry-out formalities for Customer acquisition, assisting customers in filling up of CAF (customer acquisition form), and subscription of BSNL services by residents in a pro-active manner. The FSP shall carryout required co-ordination with BSNL commercial / booking offices for completion of commercial formalities.
- 2.3 **Network deployment and provide last mile connectivity to the customer premises:**
- 2.3.1 Bidder shall plan the FTTH architecture for a given project/ customer premises for deployment.
- 2.3.2 BSNL shall provide core items like OLT, SMPS Power Supply, Battery bank, OF termination boxes, Splitters, ONTs power pack which are the standard accessories supplied along with BSNL FTTH equipment.
- 2.3.3 Bidder shall be responsible for safe transport of FTTH equipment, ONT etc from designated BSNL office to Project site at its own cost and also ensure safe storage and custody of such BSNL supplied FTTH equipment.
- 2.3.4 THE BIDDER would deploy the FTTH equipment including customer Premise Equipment viz. CPE Modem, ONT etc. & the Lead-in Fibre cable network including drop fibre etc. within the customer premises/complex at its own cost. These installation activities would be done as per the indicative practices detailed in the construction practices annexure-III as well as latest trends adopted in the construction practices by the competitors.
- 2.3.5 **Lay small section of Optical Fiber lead in cable by FSP:** FSP shall also be required to provide and lay lead-in fiber (OF) cable up to along with material like PLB pipe, OFC splicing kit, protection material and all related accessories including permission & expenditure toward RoW etc. at its own cost up to a maximum distance of 500 meters to the campus/building/office complex/market complex from nearest BSNL's available fibre. BSNL shall make the fibre available within a distance of **500 meters** from the lead-in point (entry gate) of the campus/building.
- Further, if in certain campus/building/office complex/market complex BSNL fibre is already available or available even within a distance of less than 500 mts, then FSP shall be allowed to use such BSNL's fibre with no impact on revenue share/without any cost implication.
- 2.3.6 For the deployment of the FTTH network if any additional materials / fitments are required like runway, pipes, supporting structure, terminations etc., any other items that are not covered in BSNL standard supply as mentioned above, same shall be procured by the Bidder at its own cost and complete the deployment.
- 2.3.7 The FSP shall install suitable splitters, customer premises equipments, fibre, and Ethernet cable at its own cost and also carry out of the customer end fibre/Ethernet cable wiring in the building / apartment/residence of the customers/offices etc. including its operation and maintenance including supply of material at their cost.

FSP shall also carry out installation of BSNL supplied FTTH equipment/splitters, etc., as per the indicative construction Practices mentioned in the **Annexure-III** and also per any other latest trend adopted by the competitors.

- 2.3.8 FSP is also at liberty to procure and install the Multi Dwelling Units (MDU) and provide FTTH services on Ethernet cable/Copper wiring beyond MDU depending on the site requirements.
- 2.3.9 FSP can charge for customer premises wiring beyond ONT in to his multiple rooms etc. However FSP shall not charge customer for any wiring up to ONT.
- 2.3.10 The FSP shall be responsible for the installation and configuration of the FTTH's Customer Premise Equipment (CPE) called as HONT.
- 2.3.11 BSNL officials shall coordinate with the FSP to energize the service for the customer.
- 2.3.12 After deployment of FTTH network, entire FTTH network along with the accessories, materials, bought out items etc., including the materials supplied by the bidder shall become the property/asset of BSNL.
- 2.3.13 Any Testing equipment, Computers etc., brought by the bidder for carrying out maintenance works would remain under ownership of the bidder.
- 2.3.14 FSP shall provide relevant literature, drawings, etc for the FTTH network deployed, as required to BSNL.
- 2.3.15 THE BIDDER shall comply with all applicable laws, byelaws, rules, regulations, orders, directions, notifications etc as per Law of the land and of Government/ court/ tribunals

2.4 **Operation & Maintenance of FTTH services in customer premises:**

- 2.4.1 FSP shall be responsible to operate and maintain the FTTH network including end-equipment and the customer last-mile (that is provisioned by FSP) as per the indicative Maintenance philosophy mentioned in the **Annexure-IV**, during the contract period.
- 2.4.2 The FSP shall deploy their sufficient trained personnel such that the customer needs/ complaints, faults etc. are resolved expeditiously in compliance with the maintenance philosophy mentioned in the **annexure-IV**.
- 2.4.3 On expiry of warranty period for power back up, ONTs, splitters and all accessories supplied by the BSNL, the maintenance responsibility will rest with BSNL.
- 2.4.4 FSP shall be responsible for day to day operations of FTTH services within the Project. FSP would attend the problems / complaints of the customer within the time frame as mentioned in this agreement. The committed service Quality levels as defined later would be maintained by FSP.
- 2.4.5 FSP shall at its cost provide resources for monitoring the FTTH equipment and customer lines at the project site on need basis.
- 2.4.6 Bidder would stock sufficient maintenance spares including those that are to be allotted on part of BSNL at its safe custody for attending to the faults expeditiously.

- 2.4.7 All expenditure required for maintenance and operation of Project, including the customer premises fault attending, etc. shall be made by THE BIDDER.
- 2.4.8 Bidder shall pay the wages, salary etc to the person engaged by the BIDDER for installation, operation and maintenance of FTTH network at BSNL's customers' premises and shall comply with all labour laws i.e. PF/ EPF, Industrial Disputes etc.
- 2.4.9 Maintenance of battery including replacement will be the responsibility of the customer.

3 BSNL's Role & Responsibilities

- 3.1 BSNL shall allot FTTH ONTs, splitters and its standard accessories to the FSP on need basis.
- 3.2 BSNL shall provide backbone connectivity and OF cable with in a distance of 500 meters from the building entry point/campus gate at BSNL cost.
- 3.3 BSNL shall provide the connectivity to its Telecom network infrastructure comprising of Basic, Cellular, ISP, NLD & ILD, Leased line services.
- 3.4 BSNL shall fix the tariffs applicable to customers for Services over FTTH in different circles taking into consideration the local factors, prevailing competition, market scenario, etc.
- 3.5 All customers desiring services over FTTH services at their sites, on receipt of CAF collected by the bidder, shall be registered at office of BSNL.
- 3.6 Billing/Invoicing for the services availed by the customers shall be done by BSNL.
- 3.7 The connectivity for the BSNL FTTH equipment shall be provided only by BSNL and no services from other Telecom Operator shall be extended to customer over this.

4 Marketing

- 4.1 THE BIDDER shall conduct door-to-door marketing campaign with in the Project premises for enrolment of customers to FTTH service. THE BIDDER shall deploy qualified personnel having ability to carry out such marketing campaigns.
- 4.2 BSNL will be free (but not obliged) to promote the Services in its advertising campaigns within the project.
- 4.3 THE BIDDER shall market/promote the Services at its own cost under the brand name of BSNL. The expenses for the promotion campaign shall be borne by the Bidder. Such promotion of Services will clearly mention the brand name of BSNL.

5 Areas of Operation & Service to be offered to the customers of BSNL

- 5.1 The area of operation under this agreement would be various Residential, Business/ commercial complex in various SSAs/Cities of BSNL where FTTH equipment is allotted for deployment.
- 5.2 The Services that shall be offered to BSNL customers through the FTTH equipment so installed at customer premises shall include but not be limited to:

- a. Basic Telephone service for Voice Connectivity
- b. Broadband Data Connectivity & Internet Access through FTTH-CPE
- c. Value Added Services (VAS) – like IPTV, VoIP, Voice Mail, Audio, Video-Conferencing being offered through other VAS partners.

5.2.1 **The above Services portfolio shall be continuously updated to include latest services in line with the customers' preferences, market demands and in accordance with BSNL requirements, from time to time.**

6 Compliance to all Applicable Law

6.1 Bidder (FSP) shall also comply with all other Govt. of India act and laws that are applicable to the work contained in this EOI

7 Duration of the contract period

7.1 Duration of contract is 7 years from the date of award of work. After seven years also, the contract can be extended in block of two years at the liberty of BSNL on mutually negotiated terms and conditions including commercials.

8 Confidentiality:

8.1 The Bidder shall take adequate and timely measures to ensure that information provided through it as part of this contract/agreement shall be kept confidential, secured and protected and shall not be divulged to any unauthorized person/ firm.

8.2 Bidders shall treat all documents / data / software or part of them, which BSNL may provide or Bidder shall access, as strictly confidential and maintain secrecy for the same.

8.3 The Bidder shall maintain full confidentiality of the data supplied by BSNL. Under no circumstances the Bidder shall divulge/reveal/share such data for the purpose other than for meeting BSNL's requirement. Any violation of this confidentiality clause may result in suitable penalty and /or termination of the contract, forfeiture of SD/ encashment of PBG. BSNL shall reserve the right to black-list the Bidder on all India bases. The decision of BSNL shall be final in this regard and binding on Bidder.

8.4 Bidder shall not publish, disclose any information about, make available or otherwise dispose of the document / data / software or any part or parts thereof to any third party, directly or indirectly without prior written consent of BSNL.

8.5 Bidder shall restrict access to the documents/data/software only to those of their employees to whom it will be felt necessary and relevant for the contact center operations and shall draw the provision of this commitment to BSNL made by the Bidder, to the personal attention of those of its employees to whom access to the document/data/software will be granted.

8.6 BSNL may terminate the contract, in case confidentiality as above is not maintained by the Bidder.

SECTION – 4 PART A

GENERAL INSTRUCTION TO BIDDERS

A. INTRODUCTION

1. DEFINITIONS:

- (a) **"The Bidder"** means the individual or firm who participates in this EOI and submits its bid. Bidder has also been referred as supplier at some places in this EOI document.
- (b) **"Contract Agreement"** means agreement between BSNL and Bidder.
- (c) **"FSP"** means "FTTH Services Partner" and is successful Bidder who has been awarded the work.
- (d) **"Telecom Service Provider"** means any Telecom operator in India, who is licensed by the Department of Telecommunications (DOT), Government of India to provide telecom services to the general public or to the other DOT licensed Telecom operators.
- (e) **"The Advance Work Order"** means intention of BSNL to please Work Order on the Bidder.
- (f) **"The Work Order"** means the order placed by the BSNL on the Bidder signed by the BSNL including all attachments and appendices thereto and all documents incorporated by reference therein. The purchase order shall be deemed as **"Contract"** appearing in the document.
- (g) CPE means Customer Premise Equipment, consisting of FTTH / xDSL modem, Splitter or any other equipment installed at customer's premises for enabling Broadband access.
- (h) DOT means the Department of Telecommunications.
- (i) Party or parties: BSNL, Bidder company, are referred to as 'Party'.
- (j) SSA: SSA means Secondary Switching Area as defined by BSNL.
- (k) Tariff means Charges payable by the subscriber for the service provided.
- (l) Telecom Circle means the geographical area of the BSNL circle providing the Basic Telecommunication Services as defined by BSNL.
- (m) FTTH equipment: ONTs, Splitters, Power back up and all other customers end accessories.
- (n) TRAI means Telecom Regulatory Authority of India established under the TRAI Act, 1997

2. **ELIGIBILITY CRITERIA:** Kindly refer to Clause 6 of Detailed NIT (Section 1).

3. **COST OF BIDDING**

3.1. The Bidder shall bear all costs associated with the preparation and submission of the bid. BSNL will, in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. **THE BID DOCUMENTS**

4. **DOCUMENTS REQUIRED**

4.1. The service and setup required from the Bidder, bidding procedures and contract terms and conditions are prescribed in the Bid Documents. The contents of the Bid documents are specified in the covering letter.

4.2. The Bidder is expected to examine all instructions, forms, terms and specifications in the Bid Documents. Failure to furnish all information required as per the Bid Documents or submission of the bids not substantially responsive to the Bid Documents in every respect will be at the Bidder's risk and may result in rejection of the bid.

5. **CLARIFICATION OF BID DOCUMENTS**

5.1. A prospective Bidder, requiring any clarification on the Bid Documents shall submit his queries through the BSNL in writing and by Email to the BSNL's mailing address indicated in the invitation of Bid. BSNL shall respond in writing to any request for the clarification of the Bid Documents, which it receives **not later than 21 days prior to the date of opening of the EOIs i.e. not later than XX/XX/2012 This date shall prevail over dates for submitting queries appearing anywhere on E-Tender portal.** Copies of the query (without identifying the source) and clarifications by the BSNL shall be uploaded as Clarifications to the concerned EOI on BSNL C.O. website & on ETS portal, as addenda, for all the prospective Bidders who have downloaded the official copy of EOI documents from ETS portal.

5.2. Any clarification issued by BSNL in response to query raised by prospective Bidders shall form an integral part of bid documents and it shall amount to an amendment of relevant clauses of the bid documents.

5.3. The format in which the clarifications are to be sent via FAX / E-mail (**in MS-Excel sheets only**) is

S. No.	Section	Clause No.	Ref	Page No in Bid	Brief Description of the clause	Query/ Comments of Bidder

6. AMENDMENT OF BID DOCUMENTS

- 6.1. At any time, prior to the date of submission of Bids, BSNL may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify bid documents by amendments.
- 6.2. The amendments shall be notified in writing through E-Tendering portal to all prospective Bidders on the address intimated at the time of purchase of the bid document from BSNL and these amendments will be binding on them.
- 6.3. In order to afford prospective Bidders a reasonable time (min 7 days) to take the amendment into account in preparing their bids, BSNL may, at its discretion, extend the deadline for the submission of bids suitably.

PREPARATION OF BIDS

7. DOCUMENTS COMPRISING THE BID

The bid prepared by the Bidder shall ensure availability of the following components:

- (a) Documentary evidence establishing that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted in accordance with the clause 6 of section 1 & clause 10 of section 4 part A.
- (b) Bid Security furnished in accordance with clause 11.
- (c) A Clause by Clause compliance as per clause 10.5
- (d) A Bid form and price schedule completed in accordance with clause 8 & 9.

8. BID FORM

The Bidder shall complete the bid form and appropriate price schedule furnished in the bid document.

9. Financial Proposal

- 9.1 The Firm shall submit the financial bid as per format in Section 9-Part B.
- 9.2 The approved Revenue share shall remain fixed during period of contract and shall not be subjected to variation.
- 9.3 The Financial offer should be strictly in the format as at Section 9 (B) and any variation may render the offer invalid.
- 9.4 The revenue share % should be limited to 2 decimal points only. Any figure after 2 decimal points shall be ignored for all purpose.
- 9.5 In case of variation between rate mentioned in figures & words, the amount in words shall prevail.

10. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION

EOI for Rollout, O&M of Voice & data services over FTTH on Revenue Share basis

10.1. Company is required to furnish the following documents in additions to other required documents as per EOI document:

- i) Certificate of Incorporation/ Registration.
- ii) Audited results of last three financial years (FY 2009-10, 2010-11, 2011-12)
- iii) Turnover certificate from the Company's Auditors/ CA mentioning the turnover as required under the eligibility criteria
- iv) Copy of Articles and Memorandum of Association or Partnership deed or proprietorship deed as the case may be.
- v) Details of the firm along with List of Directors on the Board of the Company with their address(es), contact telephone numbers, DIN etc. (**Section 8**)
- vi) Board's resolution in favour of authorized signatory.
- vii) Attestation of the signature of the authorized signatory by the banker.
- viii) Certificates regarding eligibility conditions as per NIT.
- ix) A no relative certificate in the format as per **Section 6(B)**.
- x) Bid security, as per the details given in the Notice (NIT) Details.
- xi) A certificate from its bankers as evidence that he has financial capability to perform the contract.

10.2. Documents establishing Bidder's Conformity to bid documents - Bidder is required to furnish a Clause-by-clause compliance demonstrating substantial responsiveness to the Technical Specifications and Commercial Conditions of the EOI. In case of deviations, a statement of the deviations and exception to the provision of the Technical Specifications and Commercial Conditions shall be given by the Bidder. A bid without clause-by-clause compliance of the section 1, 2, 3, 4 & 5 shall not be considered.

11. BID SECURITY

- 11.1. The Bidder shall furnish a bid security of amount as specified in detailed NIT (Section 1).
- 11.2. The bid security is required to protect the BSNL against the risk of Bidder's conduct, which would warrant the forfeiture of bid security pursuant to para 11.7.
- 11.3. The bid security shall be submitted in the form as specified in clause 9 of detailed NIT (section-1).
- 11.4. A bid not secured in accordance with Para 11.1 & 11.3 shall be summarily rejected by the BSNL being non-responsive at the bid opening stage.
- 11.5. The bid security of the unsuccessful Bidder will be returned/ discharged as promptly as possible and within 60 days of acceptance of EOI but not later than 30 days after the expiry of the period of the bid validity prescribed by the BSNL pursuant to clause 12.
- 11.6. The successful Bidder's bid security will be discharged upon the Bidder's acceptance of the Advance Work Order and furnishing the Performance Security.

11.7. The bid security may be forfeited:

- (a) If the Bidder withdraws his bid during the period of bid validity specified by the Bidder in the Bid form or
- (b) In the case of successful Bidder, if the Bidder fails :
 - (i) to sign the contract
 - (ii) to furnish performance security.
- (c) In both the above cases, i.e. 11.7 (a) & (b), the Bidder will not be eligible to participate in the EOI for same item for one year from the date of issue of APO. The decision of BSNL in this regard will be final & binding on all.

12. PERIOD OF VALIDITY OF BIDS

12.1. Bid shall remain valid for period specified in clause 2 of EOI information (Section 2) from the date of opening of bids prescribed by the BSNL. **A bid valid for a shorter period shall be rejected by the BSNL being non-responsive.**

12.2. In exceptional circumstances, the leaser may request the consent of the Bidder for an extension to the period of bid validity. The request and the response thereto shall be made in writing. The bid security provided under clause 11 shall also be suitably extended. The Bidder may refuse the request without forfeiting his bid security. A Bidder accepting the request and granting extension will not be permitted to modify his bid.

13. FORMAT AND SIGNING OF BID

13.1. (i) The Bidder shall submit his bid, online, complying all eligibility conditions, other terms and conditions of EOI document to be read along with the clarifications and amendments issued in this respect. All the documents must be authenticated using Digital Signature by the authorized person. **Please refer Section 4 Part B for further instructions.**

(ii) The copy of Memorandum and Article of Association shall be uploaded along with other documents as required.

13.2. The bid shall be digitally signed by the Bidder or a person duly authorized to bind the Bidder to the contract. The letter of authorization shall be indicated by written power-of-attorney accompanying the bid.

13.3. The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder in which case such corrected documents or revisions shall be authenticated by the person signing the bid using digital signature.

13.4. (i) The Power of Attorney shall be submitted and executed on the non-judicial stamp paper of appropriate value as prevailing in the respective states(s) and the same be attested by a Notary public **or** registered before Sub-Registrar of the states(s) concerned.

- (ii) The Power of Attorney be executed by a person who has been authorized by the Board of Directors of the Bidder in this regard, on behalf of the Company/Institution/Body Corporate.
- (iii) In case of the Bidder being a firm, the said Power of Attorney shall be executed by all the Bidder(s) in favour of the said Attorney.

D. SUBMISSION OF BIDS

14. SEALING AND MARKING OF BIDS:

- 14.1. The bid shall be submitted online using Two Envelope methodology. The first envelope Technical part shall consist the compliance to eligibility requirements, Technical specification and compliance to all terms and conditions of the bid document including clarifications, addenda.

The second envelope- Financial part shall contain Revenue Share.
Bid sealing is done electronically by encrypting each bid part with a symmetric passphrase created by the Bidder himself. Please refer Section 4 Part B for further instructions.

15. Venue of EOI Opening: Specified in Clause 14 of DNIT (Section 1).

- 15.1. Bids must be submitted online by the Bidders as per instructions in Section 4 Part B not later than the specified date & time indicated in the covering letter.
- 15.2. The BSNL may, at its discretion, extend this deadline for the submission of bids by amending the Bid Documents in accordance with clause 6 in which case all rights and obligations of the Leaser and Bidders previously subject to the deadline will thereafter be subjected to the deadline as extended.

16. LATE BIDS

- 16.1. No bid shall be accepted online by the Electronic Tender System® (ETS) after the specified deadline for submission of bids prescribed by the BSNL.

17. MODIFICATION AND WITHDRAWAL OF BIDS

- 17.1. The Bidder may modify, revise or withdraw his bid online after submission prior to deadline prescribed for submission of bid. If a bid is withdrawn, the same shall be archived unopened in the ETS Portal.
- 17.2. The Bidder's modification, revision or withdrawal shall have to be online and digitally authenticated.
- 17.3. No bid shall be allowed for modification subsequent to the deadline for submission of bids.

E. BID OPENING AND EVALUATION

18. OPENING OF BIDS

- 18.1. The BSNL shall open bids online in the online presence of Bidders. The Bidder's authorized representatives who chose to attend offline at time specified in Clause 12 of DNIT (Section-1) on due date may also attend. The Bidder's representatives, who are present, shall sign in an attendance register. Authority letter to this effect shall be submitted by the Bidders before they are allowed to participate in bid opening (A Format is given in **(Section 7(C))**).
- 18.2. A maximum of two representatives of any Bidder shall be authorized and permitted to attend the bid opening.
- 18.3. The Bidder's names, Bid prices, modifications, bid withdrawals and such other details as the BSNL, at its discretion, may consider appropriate will be made available online at the time of opening.
- 18.4. The date fixed for opening of bids, if subsequently declared as holiday by the BSNL, 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.

19. CLARIFICATION OF BIDS

- 19.1. To assist in the examination, evaluation and comparison of bids, the BSNL may, at its discretion ask the Bidder for the clarification of its bid. The request for the clarification and the response shall be in on line or writing. However, no post bid clarification at the initiative of the Bidder shall be entertained.
- 19.2. If any of the documents, required to be submitted along with the technical bid is found wanting, the offer is liable to be rejected at that stage. However the purchaser at its discretion may call for any clarification regarding the bid document within a stipulated time period. In case of non compliance to such queries, the bid is liable to be rejected without entertaining further correspondence in this regard.

20. EVALUATION

- 20.1. In the first stage of evaluation, BSNL (referred as purchaser also) shall evaluate the proposals to determine whether they are complete, whether required bid security has been furnished, whether the documents have been properly signed and whether the proposals are generally in order.
- 20.2. BSNL shall determine the substantive responsiveness of each of the technical and commercial proposals to the requirements of the EOI document. A substantively responsive proposal is one which conforms to all technical specifications and commercial terms and conditions of the EOI document without material deviation/exceptions. The BSNL's determination of proposal's responsiveness shall be based on the contents of the proposal itself without recourse to extrinsic evidence.

- 20.3. A bid, determined as substantially non-responsive will be rejected by the BSNL and shall not subsequent to the bid opening be made responsive by the Bidder by correction of the non-conformity.
- 20.4. The BSNL may waive any minor infirmity or non-conformity or irregularity in a bid which doesn't constitute a material deviation, provided such waiver doesn't prejudice the establishment of techno-commercial parity among the proposals.
- 20.5. During the evaluation, BSNL at its discretion may call upon the Bidder to give a techno-commercial presentation of its offer, to explain the solution offered its capability to undertake the project and to respond to any question from BSNL.
- 20.6. The financial proposals of only those Bidders, whose techno-commercial proposals have been determined as substantively responsive, shall be opened.
- 20.7. The tender will be evaluated as per revenue share % (up to two decimal points) quoted by the Bidder for offering to BSNL. Evaluation of financial bids for each of the 14 zones shall be done separately and independently. After evaluation, BSNL shall prepare a separate list of Bidders for each of the 14 zones, arranged in decreasing order of the quoted revenue share offered to BSNL starting from the highest (i.e. H1, H2, H3 and so on) for the purpose of awarding work.
- 20.8. If two or more bidders become H1 in any zone, then the bidder with higher average annual turnover of last 3 years (i.e. 2009-10, 2010-11, 2011-12) shall be placed higher in the ranking list and H1, H2 and so on shall be decided accordingly.

21. CONTACTING THE BSNL

- 21.1. Subject to Clause 19, no Bidder shall try to influence the BSNL on any matter relating to its bid, from the time of the bid opening till the time the contract is awarded.
- 21.2. Any effort by a Bidder to modify his bid or influence the BSNL in the Leaser's bid evaluation, bid comparison or contract award decision shall result in the rejection of the bid.

F AWARD OF CONTRACT

22. PLACEMENT OF ORDER

- 22.1. After evaluation of financial proposals (bids), BSNL shall prepare a separate list of Bidders for each of the 14 zones arranged in decreasing order of % revenue share offered to BSNL starting from the Highest (i.e. H1, H2, H3 and so on), for the purpose of awarding work.
- 22.2. **H1 shall be considered for awarding of work in respective zones. H1 rate may be different in each of the 14 zones.**

- 22.3. No bidder shall be awarded contract in more than seven (7) zones for which separate financial bids have been invited. In case any bidder becomes H1 in more than 7 (Seven) zones, the H1 bidder shall vacate the zone(s) in which the evaluated H1/H2 ratio is the lowest from amongst the zones in which it is L1. The zone(s) so vacated shall be awarded to the corresponding H2 bidder at the H1 rate of that zone.
- 22.4. In any zone, the offer to H2 bidder shall be at the price of the H1 of that zone. The H2 may decline the offer without the risk of forfeiting its bid security.
- 22.5. In case H2 bidder declines to accept the offer, the offer shall be made to H3 bidder of that zone and so on in the same manner as has been made to H2 bidder.
- 22.6. In the event of H2 and so on bidders refusing to accept the Revenue share of H1 bidder in any zone, BSNL reserve the right to offer the contract for more than 7 zones to the same firm. It is mandatory for the H1 bidder firm to accept such an offer and shall perform the whole contract as envisaged in the EOI document.
- 22.7. The H2, H3 and so on Bidders may decline the offer without the risk of forfeiting its bid security. Obviously the bid security of the H1 Bidder shall be forfeited in case he refuses to accept his offer.
- 22.8. There shall be 14 AWO (Advance Work Orders) one for each zone. However each of BSNL Territorial (Telecom) circle mentioned in the table in the section-1 of EOI shall issue separate Work Order (WO) against the respective AWO.

23. BSNL'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The BSNL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected Bidder or Bidders on the grounds of Leaser's action.

24. SIGNING OF CONTRACT

- 24.1. The issue of WO shall constitute the award of contract on the Bidder.
- 24.2. Upon the successful Bidder furnishing performance security, the BSNL shall discharge the bid security in pursuant to clause 11.

25. ANNULMENT OF AWARD

- 25.1. Failure of the successful Bidder to comply with the requirement of clause 24 shall constitute sufficient ground for the annulment of the award and the forfeiture of the bid security in which event the BSNL may make the award to any other Bidder at the discretion of the Leaser or call for new bids.
- 25.2. While all the conditions specified in the Bid documents are critical and are to be complied, special attention of Bidder is invited to the following clauses of the bid

documents. Non-compliance of any one of which shall result in outright rejection of the bid.

- (i) **Clauses 11.1, 11.3 & 12.1 of Section 4:** The bids will be rejected at opening stage if Bid security is not submitted as per Clauses 11.1 & 11.3 and bid validity is less than the period prescribed in Clause 12.1 mentioned above.
- (ii) **Clause 2 & 10 of Section 4:** If the eligibility condition as per clause 2 of Section 4 is not met and / or documents prescribed to establish the eligibility as per Clause 10 of section 4 are not provided, the bids will be rejected without further evaluation.
- (iii) If clause-by-clause compliance and deviation statements as prescribed are not given, the bid will be rejected at the stage of primary evaluation. **In case of no deviations, a statement to that effect must be given.**
- (iv) While giving compliance to Section-5 Part A, General Commercial conditions, Section-4 Part A, Special Instructions to Bidders, Section-5 B Special Conditions of Contract and Section-3 Scope of the work, ambiguous words like "Noted", "Understood", "Noted & Understood" shall not be accepted as complied. While giving compliances, reference to the enclosed documents showing compliances shall be given.
- (v) Price Schedules are duly filled as given in Section 9 Part B.

25.3. Before outright rejection of the Bid by Bid-opening team for non-compliance of any of the provisions mentioned in clause 28 of Section 4 Part A , 11.1 of Section- 4 Part A and Clause 6 of Section 1, though, the Bidder company is given opportunity to explain their position, however if the person representing the Bidder company is not satisfied with the decision of the Bid opening team, he / they can submit the representation to the Bid opening team immediately but in no case after closing of the EOI process with full justification quoting specifically the violation of EOI condition if any.

25.4. Bid opening team will not return the bids submitted by the Bidders on the date of EOI opening even if it is liable for rejection and will archive the bids unopened in the ETS Portal.

26. BSNL reserves the right to blacklist a Bidder for a suitable period in case they fail to honor their bid without sufficient grounds.

27. The Bidder should give a certificate that none of his/her near relative is working in the units as defined below where he is going to apply for the EOI.

In case of proprietorship firm, certificate will be given by the proprietor.

For partnership firm, certificate will be given by all the partners.

In case of Limited Company, certificate will be given by all the Directors of the company excluding Government of India/Financial institution nominees and

independent non-Official part time Directors appointed by Govt. of India or the Governor of the state and full time Directors of PSUs both state and central.

Due to any breach of these conditions by the company or firm or any other person the tender will be cancelled and Bid Security will be forfeited at any stage whenever it is noticed and BSNL will not pay any damage to the company or firm or the concerned person.

The company or firm or the person will also be debarred for further participation in the concerned unit.

The near relatives for this purpose are defined as:-

- (a) Members of a Hindu undivided family.
- (b) They are husband and wife.
- (c) The one is related to the other in the manner as father, mother, son(s) & Son's wife (daughter in law), Daughter(s) and daughter's husband (son in law), brother(s) and brother's wife, sister(s) and sister's husband (brother in law).

Please refer to the Performa enclosed in **Section 6(B)** .

28. VERIFICATION OF DOCUMENTS AND CERTIFICATES

The Bidder will verify the genuineness and correctness of all documents and certificates, including experience/performance certificates, issued either by the Bidder or any other firm / associate before submitting them in the bid. The onus of proving genuineness of the submitted documents would rest with the Bidder.

As per requirement of the EOI's conditions, if any document / paper / certificate submitted by the participant Bidder is found to be false / fabricated / tempered / manipulated at any stage during bid evaluation or award of contract, then the bid security (EMBG) of the Bidder would be forfeited and the Bidder would be disqualified from the EOI. Action would also be taken for banning of business dealing with the defaulting firm. In case contract has already awarded to the Bidder, then PBG would be forfeited and the contract would be rescind / annulled and BSNL would be at liberty to procure the ordered goods and services from any other source at the risk and cost of the defaulting Bidder. Action would also be taken for banning business dealing with the defaulting firm.

To obviate any possibility of doubt and dispute and maintain veracity of the documents / papers / certificates, the documents conforming to eligibility part along with EMBG (bid security) of requisite amount will be submitted by the participant Bidder duly authenticated by the authorized signatory and will be checked at the time of EOI opening. This bid part (already digitally signed by the authorized representative of the Bidder Company during bid submission) will be digitally signed by the in charge of the EOI opening team and will be kept preserved along with the bid submitted online. In case of any dispute these papers will be treated as authentic one".

AGM (MMY)

SECTION – 4 PART B

SPECIAL INSTRUCTIONS TO BIDDERS FOR E-TENDERING

General

The Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as given in these Tender Documents. Submission of Online Bids is mandatory for this Tender.

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, BSNL has decided to use the portal (<https://www.tcil-india-electronictender.com>) through TCIL, a Government of India Undertaking.

Benefits to Suppliers are outlined on the Home-page of the portal.

Instructions

1. Tender Bidding Methodology:

Sealed Bid System – 'Two Stage - Two Envelopes'.(Financial & Technical bid shall be submitted at the same time)

2. Broad outline of activities from Bidders prospective:

1. Procure a Digital Signing Certificate (DSC)
2. Register on Electronic Tendering System® (ETS)
3. Create Users and assign roles on ETS
4. View Notice Inviting Tender (NIT) on ETS
5. Download Official Copy of Tender Documents from ETS
6. Clarification to Tender Documents on ETS
 - Query to BSNL (Optional)
 - View response to queries posted by BSNL as addenda.
7. Bid-Submission on ETS
8. Attend Public Online Tender Opening Event (TOE) on ETS
 - Opening of Technical-Part
9. Post-TOE Clarification on ETS (Optional)
 - Respond to BSNL's Post-TOE queries
10. Attend Public Online Tender Opening Event (TOE) on ETS
 - Opening of Financial-Part
(Only for Technical Responsive Bidders)

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

3. Digital Certificates

For integrity of data and its authenticity/ non-repudiation of electronic records, and be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC). also referred to as Digital Signature Certificate (DSC), of Class 2 or above, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

4. Registration

To use the ElectronicTender[®] portal (<https://www.tcil-india-electronictender.com>). Vendor need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site. Pay Annual Registration Fee as applicable.

Note: After successful submission of Registration details and Annual Registration Fee (as applicable). Please contact TCIL/ ETS Helpdesk (as given below), to get your registration accepted/activated.

TCIL Helpdesk	
TCIL's Contact Person	<i>Mr. Manish Tiwari</i>
Telephone/ Mobile	011-26202624 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	<i>manish.tiwari@tcil-india.com</i> [Please mark CC: support@electronictender.com]

ETS Helpdesk	
TCIL's Contact Person	<i>Mr. Rakesh Ranjan</i>
Telephone/ Mobile	M -8527311567 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	support@electronictender.com]

BSNL Contact-1	
BSNL's Contact Person	<i>Mr. Sanjay Vatsa, Dy. Mgr.(MMY)</i>
Telephone/ Mobile	011-23717844 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	<i>srvatsabsnl@gmail.com</i>

BSNL Contact-2	
BSNL's Contact Person	<i>Mr. Manoj Jain ,Dy. Mgr.(MMX)</i>
Telephone/ Mobile	011-23037172 [between 9:30 hrs to 18:00 hrs on working days]
E-mail ID	manoj_jain@bsnl.co.in

5. Some Bidding related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on ETS. Broad outline of submissions are as follows:

- Submission of Bid Security/ Earnest Money Deposit (EMD)
- Submission of digitally signed copy of Tender Documents/ Addendum
- Two Envelopes
 - Techno-commercial -Part
 - Financial-Part

6. Offline Submissions:

The Bidder is requested to submit the following documents offline to DM (MMT), BSNL Corporate Office, 2nd Floor, Bharat Sanchar Bhawan, Janpath, New Delhi – 110001 on or before the date & time of submission of bids specified in covering letter of this tender document, in a Sealed Envelope. The envelope shall bear (the project name), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).

1. EMD-Bid Security (Original copy).
2. DD/ Bankers cheque of Rs. 8,000/- drawn in favour of AO(Cash), BSNL CO, New Delhi, payable at New Delhi against payment of tender fee.
3. Power of attorney in accordance with clause 13.4 of Section-4 Part A.

Note: The Bidder has to upload the Scanned copy of all above said original documents as Bid-Annexure during Online Bid-Submission also.

7. Special Note on Security of Bids

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in Electronic Tender's software. Specifically for Bid Submission, some security related aspects are outlined below:

As part of the Electronic Encrypter™ functionality, the contents of both the 'Electronic Forms' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (e.g I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is recommended that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each Bidder during the TOE itself, when demanded by the concerned Tender Opening Officer.

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-tendering server/ portal.

8. Public Online Tender Opening Event (TOE)

ETS offers a unique facility for 'Public Online Tender Opening Event (TOE)'. Tender Opening Officers as well as authorized representatives of Bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. For this purpose, representatives of Bidders (i.e. Supplier organization) dully authorized are requested to carry a Laptop and Wireless Connectivity to Internet.

Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)' has been implemented on ETS.

As soon as a Bid is decrypted with the corresponding 'Pass-Phrase' as submitted online by the Bidder himself (during the TOE itself), salient points of the Bids are simultaneously made available for downloading by all participating Bidders. The tedium of taking notes during a manual 'Tender Opening Event' is therefore replaced with this superior and convenient form of 'Public Online Tender Opening Event (TOE)'.

ETS has a unique facility of 'Online Comparison Chart' which is dynamically updated as each online bid is opened. The format of the chart is based on inputs provided by the Buyer for each Tender. The information in the Comparison Chart is based on the data submitted by the Bidders in electronic forms. A detailed Technical and/ or Financial Comparison Chart enhances Transparency. Detailed instructions are given on relevant screens.

ETS has a unique facility of a detailed report titled 'Minutes of Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating Bidders for 'Viewing/ Downloading'.

There are many more facilities and features on ETS. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

9. Other Instructions

For further instructions, the vendor should visit the home-page of the portal (<https://www.tcil-india-electrontender.com>), and go to the **User-Guidance Center**

The help information provided through 'ETS User-Guidance Center' is available in three categories – Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links are provided under each of the three categories.

Important Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

The following '**FOUR KEY INSTRUCTIONS for BIDDERS**' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS.
2. Register your organization on ETS well in advance of your first tender submission deadline on ETS
3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS
4. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, et al)

While the first three instructions mentioned above are especially relevant to first-time users of ETS, the fourth instruction is relevant at all times.

10. Minimum Requirements at Bidders end

- Computer System with good configuration (Min P IV, 1 GB RAM, Windows XP)
- Broadband connectivity.
- Microsoft Internet Explorer 6.0 or above
- Digital Certificate(s) for users.

11. Vendors Training Program

One day training (10:00 to 17:00) would be provided. Training is optional. Vendors are requested to carry a Laptop and Wireless Connectivity to Internet.

Scheduled Date	Date of uploading of Tender document + 7 days
Venue	Meeting Room, 2 nd Floor, BSNL Corporate Office, Bharat Sanchar Bhawan, Janpath, New Delhi - 110001
Vendors Training Charges (Per Participant) per training day	Rs. 2,500/- (plus Service Tax @ 10.3 %)
Mode of Payment of Fees	DD payable to M/s TCIL, New Delhi at New Delhi

Section 5 PART A

General Commercial Conditions of Contract.

1. INTELLECTUAL PROPERTY RIGHTS/ COPYRIGHTS/Patent rights

The services to be offered to the customers under this agreement shall be provided under the brand name of BSNL. However, the FSP shall be solely responsible for the Intellectual Property Rights/ copyright and lawfulness of the services offered on part of FSP and compliance to all applicable rules and laws of Govt. applicable from time to time. FSP shall indemnify BSNL for the same. Under no circumstances, BSNL shall have the responsibility for any liability arising on account of the same.

2. Performance Bank Guarantee (PBG)

- 2.1. Successful Bidders would furnish a Performance Bank Guarantee (PBG) separately for each of the zones (for which offer has been made to bidder) of an amount indicate in the table below, **with a validity period of minimum Eight Years**. The performance security Bond shall be in the form of Bank Guarantee issued by a scheduled Bank and in the form provided in section 7 (B) of this Bid Document.

S. No.	Zone	Amount in INR Crore
1	Zone-1	1.5
2	Zone-2	1.1
3	Zone-3	1.75
4	Zone-4	1.75
5	Zone-5	1.75
6	Zone-6	2.5
7	Zone-7	1.75
8	Zone-8	2.1
9	Zone-9	2
10	Zone-10	1.75
11	Zone-11	1.75
12	Zone-12	2.35
13	Zone-13	1.85
14	Zone-14	1.6

- 2.2. Performance guarantee shall be submitted by the bidder separately for each of the zones, for which the offer has been made to the bidder.
- 2.3. Performance guarantee shall be initially valid for a minimum period of Eight years, which include time for installation and commissioning time. For extension of contract beyond five years, PBG shall have to be renewed accordingly.
- 2.4. The proceeds of Performance Bank guarantee shall be payable to BSNL as compensation for any loss resulting from the Bidder's failure to complete its obligation under the contract. BSNL shall en-cash the PBG in the event of breach or failure to perform/meet the obligations on the part of Bidder/Lead Bidder without prejudice any rights/remedies available to BSNL.
- 2.5. The Bidder shall ensure that performance bank guarantee (PBG) is send to the BSNL directly by the issuing bank under Registered Post (A.D). In exceptional circumstances where the PBG is submitted by the Bidder to the BSNL, the Bidder shall ensure that an unstamped duplicate copy of the PBG is sent immediately by the bank direct to BSNL by Registered Post (A.D).

3. Rollout target

- 3.1. The minimum customer base on FTTH that the Bidder has to acquire on an annual basis is 20% of capacity specified in respective city. Penalties as below shall be levied in case of failure to acquire predetermined number of customers.

4. Penalty

- 4.1. **Penalties against Delay in Roll out:** The following penalties shall be levied on the FSP for non achievement of Gross physical target. These penalties shall be applicable only if the failure/ non performance in the customer acquisition/provisioning on part of FSP. FSP shall not be penalized if the failure is due to non availability of network/fiber readiness from BSNL side in the designated locations. The penalties shall be calculated by the designated SSA office on city basis and on annual basis.

S. No.	Delay in roll out of FTTH services	Penalty
1	Less than or equal to 50% of the target (20% of City FTTH capacity) on yearly basis	3 Lakhs per City for each year separately
2	More than 50% and less than or equal to 90% of the target (20% of City FTTH capacity) on yearly basis.	2 Lakhs per City for each year separately
3	More than 90% of the target (20% of City FTTH capacity) on yearly basis	No penalty.

4.2. If the FSP is not able to meet the above yearly target for consecutive 2 years then BSNL reserves the right to appoint more FSP in that area. BSNL shall also be at liberty to terminate the contract and forfeit the full performance Bank Guarantee.

4.3. **Penalties against delays in provisioning**

Target Parameter: Services to the customers shall be provisioned within 7 days of generation and making over of Order Book (OB) by BSNL to FSP.

Penalty: Delay beyond 7 days will invite penalty at the rate of Rs. 10/- per line per day with an upper ceiling of Rs 100 per customer line.

4.4. **Penalties against service failures/delays in fault restoration:** The following penalties shall be levied on the FSP (FTTH services partner) for delay in failure / disruption of the services offered and also delay in fault restoration. These penalties shall be applicable only if the delay, failure / disruption is due to the fault within the Project premises which is under O&M scope of FSP. FSP shall not be penalized if the failure is due to external plant, cable cut, etc in BSNL portion. The penalties shall be calculated by the designated BSNL office on a monthly basis.

(i) **Penalty for delay in restoration of Bulk Faults**

S. No.	Nature of fault	Penalty Amount
1	Non – availability of FTTH services for more than 4 hours to complete Business complex /Apartment Premises	Rs. 2,000 per day per occasion

(ii) **Penalties for Delay in Restoration for individual Line Faults**

S. No.	Parameter	Penalty Amount	Remark
1	<u>Faults Clearance:</u> within 6 Hrs of made over of fault to FSP by BSNL.	Delay beyond this will invite penalty of Rs. 50 per line per day.	Faults made over to FSP by BSNL after 16:00 Hrs would be treated as made-over on next working day at 8:00 AM, for the purpose of effecting penalties. (Though FSP shall make every attempt to attend the faults as soon as they come to the knowledge of FSP.)

(iii) **Penalty for delay in restoration of leased line fault**

S. No.	Parameter	Penalty Amount	Remark
1	<u>Leased line Faults Clearance:</u> With-in 6 Hrs of made over of fault to FSP by BSNL.	Delay beyond this will invite penalty of Rs. 1000 per line per day.	Faults made over to FSP by BSNL after 16:00 Hrs would be treated as made-over on next working day at 8:00 AM, for the purpose of effecting penalties. (Though FSP shall make every attempt to attend the faults as soon as they come to the knowledge of FSP.)

4.4.1. Settlement of penalty for (i), (ii) and (iii) above shall be done on monthly basis. Total penalty in case of delay in fault restoration shall be limited to 20 % of the total net revenue receivable by the Bidder in a SSA in a month.

5. PAYMENT TERMS (Revenue Collection and Sharing) –

5.1. All services over FTTH shall be offered by BSNL in the brand name of BSNL and accordingly BSNL shall raise the invoices for services availed by customers. FSP shall not charge the Subscriber directly for any service being delivered by BSNL over FTTH.

5.2. BSNL shall collect the revenue from subscribers through various channels.

5.3. BSNL Revenue share payment shall be done by BSNL to FSP on a monthly basis on realized amount.

5.4. Every Telecom Circle shall release the payment for works in their circle. FSP shall submit invoices by 5th of every month, for each circle separately for the services rendered in the respective circle in the preceding calendar month, to the officer nominated by BSNL.

5.5. BSNL circle shall ensure that due payments are released expeditiously by 15th of every month.

5.6. BSNL would not pay any revenue share out of one time charges/security deposit for rollout and installation of FTTH network.

5.7. All applicable taxes and various Government levies, e-payment commission, License fee (if any) shall be deducted first from the revenues realized on account of services availed over FTTH by the customers. For the sale accruing through BSNL's sales channels the sales incentives/ commissions will be deducted first before sharing the revenue.

5.8. For leased line and other value added services (VAS, which are being offered by BSNL in partnership with other VAS providers) extended over FTTH) provided over

FTTH, FSP shall get a revenue share equal to 10% of his quoted share of revenue for Voice & BB services net of all statutory taxes, levies, license fees, commissions etc.

- 5.9. As part of BSNL comprehensive offering to a project, BSNL may provide few rent-free telephone lines, few Smart PCO lines, install signal boosters etc., These services needs provision of FTTH line along with ONT. FSP shall install and provision such line request. It may be noted that there will not be any revenue share payments to FSP on such facilities.
- 5.10. Rebates and compensation given by courts due to service deficiency, if any, to the customers shall be deducted from the gross revenue before the Revenue Share of FSP is calculated.
- 5.11. Any discrepancy found in the revenue share settlement would be mutually discussed and resolved. Balance of payments arising due to any reason shall be adjusted in future.

6. Initial Term, Exit clause and Renewal

- 6.1. Duration of contract is 7 years from the date of award of work. After Seven years also, the contract can be extended in a block of two years at the liberty of BSNL on mutually negotiated terms and conditions including commercials.
 - i) The terms and conditions of the contract shall come into effect from the date of award of work, and will remain valid up to a period of five (7) years unless and until terminated by either Party by providing a written notice of termination not less than six (6) months prior to the intended termination date. However, Bidder can serve the notice of termination only after completion of three years of contract starting from date of award of work. In case bidder exit before 3 years from the date of award of work then the PBG shall be forfeited.
 - ii) BSNL also reserves the right to terminate the agreement, at any time, due to change in its own license conditions or upon directions from the DOT/ Government of India. In such a situation, BSNL shall not be responsible for any damage or loss caused or arisen out of aforesaid action.
 - iii) In case of termination or other-wise, BSNL shall have the ownership of the equipment / accessories installed by FSP till the date of termination. This shall include MDF, Runways, Pipes, support structures, OF cables, fiber wiring, Ethernet cable etc.,
 - iv) All the clauses of the contract shall come into effect from the date of award of work, unless otherwise specified.
 - v) No penalty / damages / compensation shall be payable by either party before expiry of agreement period, if exit is made under the following circumstances:
 - a) the order of any Government (Central/State) or any statutory body
 - b) in Force Majeure event

- vi) On termination or surrender or expiry of the Agreement, the BG shall be released to FSP only after ensuring clearance of dues, if any, which FSP is liable to pay to BSNL. In case of failure of FSP to pay the amounts due to BSNL, the outstanding amounts shall be realized through encashment of the Bank Guarantee without prejudice to any other action(s) for recovery of the amounts due to BSNL.
- vii) Notwithstanding any other rights and remedies provided elsewhere in the agreement, upon termination of this agreement:
 - a. Neither Party shall represent the Other Party in any of its dealings.
 - b. Neither Party shall intentionally nor otherwise commit any act(s) as would make a third party to believe that the other Party is still the former Party's partner.
 - c. Each party shall stop using the other Party's name, trade mark, etc., in any audio or visual form.

7. FORCE MAJEURE

- 7.1. If, at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to as events) provided notice of happenings of any such eventuality is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this contract nor shall either party have any claim for damages against other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such an event come to an end or cease to exist, and the decision of BSNL as to whether the deliveries have been so resumed or not shall be final and conclusive. Further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reasons of any such event for a period exceeding 60 days, either party may, at its option, terminate the contract.
- 7.2. Provided, also that if the contract is terminated under this clause, BSNL shall be at liberty to take over from the Supplier at a price to be fixed by BSNL, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture which may be in possession of the Supplier at the time of such termination or such portion thereof as BSNL may deem fit, except such materials, bought out components and stores as the Supplier may with the concurrence of BSNL elect to retain

8. Termination of contract due to non-performance (default)

- 8.1. BSNL may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Bidder, terminate this contract in whole or in part under any of the following circumstances:
- a) If the Bidder fails to meet the Roll out target in consecutive 3 years ;
 - b) If the Bidder fails to perform any other obligation(s) under the Contract; and
 - c) Breach of non-fulfilment of Agreement conditions may come to the notice of BSNL through complaints or as a result of the regular monitoring. Wherever considered appropriate BSNL may conduct an inquiry either *suo-moto* or on complaint to determine whether there has been any breach in compliance of the terms and conditions of the agreement by FSP. FSP shall extend all reasonable facilities and shall endeavour to remove the hindrance of every type upon such inquiry
 - d) If the Bidder, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as BSNL may authorize in writing) after receipt of the default notice from the BSNL.
- 8.2. In the event the BSNL terminates the contract in part, the Bidder shall continue the performance of the contract to the extent not terminated.

9. TERMINATION FOR INSOLVENCY

- 9.1. BSNL may at any time terminate the Contract by giving written notice to the Bidder, without compensation to the Bidder. If the Bidder becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination shall not prejudice or affect any right of action or remedy which has accrued or shall accrue thereafter to BSNL.

10. ARBITRATION

- 10.1. In the event of any question, dispute or difference arising under this agreement or in connection there-with (except as to the matters, the decision to which is specifically provided under this agreement), the same shall be referred to the sole arbitration of the CMD, BSNL or in case his designation is changed or his office is abolished, then in such cases to the sole arbitration of the officer for the time being entrusted (whether in addition to his own duties or otherwise) with the functions of the CMD, BSNL or by whatever designation such an officer may be called (hereinafter referred to as the said officer), and if the CMD or the said officer is unable or unwilling to act as such, then to the sole arbitration of some other person appointed by the CMD or the said officer. The agreement to appoint an arbitrator will be in accordance with the Arbitration and Conciliation Act 1996. There will be no objection to any such appointment on the ground that the arbitrator is a Government Servant or that he has to deal with the matter to which the agreement relates or that in the course of his duties as a Government Servant he has expressed his views on all or any of the matters in dispute. The award of the arbitrator shall be final and binding on both the parties to the agreement. In the event of such an arbitrator to whom the matter is originally referred, being transferred or vacating his office or being unable to act for any reason whatsoever,

the CMD, BSNL or the said officer shall appoint another person to act as an arbitrator in accordance with terms of the agreement and the person so appointed shall be entitled to proceed from the stage at which it was left out by his predecessors.

10.2. The arbitrator may from time to time with the consent of both the parties enlarge the time frame for making and publishing the award. Subject to the aforesaid, Arbitration and Conciliation Act, 1996 and the rules made there under, any modification thereof for the time being in force shall be deemed to apply to the arbitration proceeding under this clause.

10.3. The venue of the arbitration proceeding shall be the office of the CMD, BSNL, New Delhi or such other places as the arbitrator may decide.

11. SUBCONTACTS

11.1. The SASP shall notify BSNL in writing of all subcontracts awarded under these contacts if not already specified in his bid. Such notification, in his original bid or later shall not relieve the supplier from any liability or obligation under the contract.

12. SET OFF

12.1. Any sum of money due and payable to the Bidder (including security deposit refundable to him) under this contract may be appropriated by the BSNL or any other person(s) contracting through the BSNL and set off the same against any claim of the BSNL or such other person or person(s) for payment of a sum of money arising out of this contract or under any other contract made by the Bidder with the BSNL or such other person(s) contracting through the BSNL.

13. Indemnification

13.1. Bidder shall indemnify BSNL against any third party claim for carriage/ termination or any other charges that may be payable for this traffic.

13.2. In case of any claims by any third party towards licensing or otherwise for the products provided by the Bidder, it will be the sole responsibility of the Bidder to settle such claims. Under no circumstance, BSNL will have any liability for any such claim.

13.3. Since the SaaS service shall be launched under BSNL license granted by DOT, Bidder will ensure that there is no breach of license conditions and indemnify BSNL for damages both for financial and otherwise, arising out of any breach of the licensing condition.

13.4. Bidder, as a provider of SaaS services on behalf of BSNL, will abide by all the regulatory, statutory and licensing norms without any violation.

13.5. Bidders have to give a Indemnity bond as per Annexure VI along with the technical bid.

14. COURT JURISDICTION:

EOI for Rollout, O&M of Voice & data services over FTTH on Revenue Share basis

- (i) Any dispute arising out of the EOI/bid document/evaluation of bids/issue of acceptance letter shall be subject to jurisdiction of the competent court at the place from where the NIT/EOI has been issued.
- (ii) Where a contractor has not agreed to arbitration, the dispute/claims arising out of the Contract/PO entered with him shall be subject to the jurisdiction of the Competent Court at the place from where Contract/PO has been issued. Accordingly ,a stipulation shall be made in the contract as under:

‘This Contract/PO is subject to jurisdiction of Court at Delhi only’.

SECTION 5 PART B

INDICATIVE TECHNICAL DETAILS

1. Overview of BSNL's broadband network:

- 1.1. The broadband network of BSNL (Deployed under the project "National Internet Backbone-II" and Broadband Multiplay) comprises of the managed MPLS backbone and the broadband access / aggregation network.
- 1.2. The two layers of the MPLS backbone are the CORE & the EDGE networks. The CORE Network comprises of the high end routers connected with the multiple high speed STM-16 transmission links whereas the EDGE network comprises of the EDGE routers connected to the CORE routers through the Gigabit Ethernet or STM-16 links. This layer aggregates customer traffic, enforces QoS and extends managed access to the customers. This layer provides the customer access through three mechanisms: (a) Dialup, (b) Dedicated access, and (c) Broadband access.
- 1.3. The broadband access is provided via multiple Broadband Network Gateway (BNG). It is responsible for carrying out the 'AAA' functionalities of the broadband customers along with enforcing desired Quality of Service (QoS) on per customer per service basis.
- 1.4. The access to BNG is extended through a RPR based aggregation network. The access device of various broadband network such as DSLAM (for broadband on DSL), OLT (for broadband on FTTH) is connected to the nearest RPR switch through which the last mile connectivity is extended to the end customer.
- 1.5. The OSS / BSS applications along with customer data repository, CDR generation, mediation etc is done on a central basis at NOC Bangalore with DR NOC at Pune in with billing and CRM functionalities for retail BB customers being extended through Billing and customer care system (known as CDR system) on a zonal basis.

2. Overview of BSNL's FTTH network:

- 2.1. BSNL is deploying Next Generation Play Access Network based on Fiber to the home (FTTH) for provisioning data speed of the order of tens of Mbps including Gigabits,.
- 2.2. The underlying technologies that are being used for the provision of Fiber connectivity on the last mile is GPON and GEAPON. The total capacity across country is around 5 Lakhs lines through GPON technology and around 1.5 Lakhs through GEAPON technology. The GPON / GEAPON based network consist of Optical Line Termination (OLT) at the service provider end and the Optical Network Unit (HONT) at the customer end.
- 2.3. Each OLT can provide multiple Fiber connections. Each of these connections is connected on a different building on a pre-designated termination point in the building / apartment. The Fiber connection is generally done on a splitter which facilitates further splitting of the Fiber to the individual customer.
- 2.4. The GPON / GEAPON network thus deployed rides on the RPR based aggregation network and Broadband network Gateway / AAA / LDAP etc deployed as part of Broadband Multiplay / NIB-II.

3. FUNCTIONAL REQUIREMENT:

- 3.1. The activities start with identifying the targeted segment and acquiring the customers. Based on expected demand for future 2 Years, FSP will plan for suitable splitters among the 1:4/2:4, 1:8, 1:16, 1:32/2:32. FSP will inform BSNL officials about the expected customer demand, tap the available fiber from nearest place in consultation with BSNL and install suitable splitter. BSNL will provide fiber within a distance of 500 mts. of entry point of campus/complex, if it is not already available. In case BSNL has already terminated the OFC in the campus/ building, the same can be utilized. However, no further extension of OFC will be done by BSNL in the campus and the same is to be carried out by the FSP.
- 3.2. The Bidder will plan and deploy the FTTH GPON/GEAPON network in the complex for deployment of GPON network as per indicative construction practices mentioned in Annexure – III. Bidder will inform BSNL about the detailed plan and request for OFC and demand for required materials that are to be supplied by BSNL.
- 3.3. BSNL would bring the backbone OF Cable within 500 mts. of the premises. Beyond this point the OFC connectivity to various blocks in the complex and further to the Apartments / Units needs to be provided and laid by the FSP. BSNL shall maintain the back bone fiber from this point towards exchange side.
- 3.4. BSNL shall supply the ONTs and splitters for installation to FSP. The FTTH equipment supplied by BSNL shall have capability to provide Voice, Data, Internet, Video, IPTV and other value added services.
- 3.5. FSP will install the Splitter (s), terminate the Fibers in splitter from the OFC termination point, extend the pig tails in suitable micro duct or PVC pipe to the customer premise and connect the field-crimp connectors at both ends.
- 3.6. The customer rollout work further involves provisioning activities like connecting the field-crimp connectors at both ends of Drop fiber (one end with in customer premises, other end at splitter end). Installation of ONT along with power back-up provided by BSNL at customer location and co-ordination with various BSNL offices for enabling the services.
- 3.7. The FSP needs to carry out the customer end Fiber wiring from the pre-designated termination point in the building / apartment, its operation and maintenance, installation of the FTTH's Customer Premise Equipment (CPE) called as HONT along with power backup and its day-to-day maintenance including customer care.
- 3.8. The termination point in the building / apartment where the splitter will be installed will generally be in the ground floor / basement of the building. The Fiber coming from the nearest Optical Line Termination (OLT) will be terminated at this point.
- 3.9. The FSP will be responsible for further extending the Fiber (pigtail) from the splitter installed at the pre-designated termination point in the building / apartment to the individual customer premises, properly shielding them with PVC pipes or using micro-duct along with internal wiring inside the customer premises till HONT location. FSP shall be at liberty to charge the customer for internal wiring from HONT towards end devices such as TVs, Laptops etc as per the requirement of the customer.
- 3.10. The FSP can either choose Micro-duct or PVC pipes for carrying out GPON wiring in a given project.
- 3.11. The FSP shall also be responsible for its day-to-day operations and maintenance of the physical infrastructure thus extended to the customer premises from the pre-designated termination point in the building / apartment.

- 3.12. The FSP shall also carry out the installation, configuration and maintenance of the FTTH's Customer Premises Equipment called as Home Optical Network Terminal (HONT). Based on predefined customer's request, BSNL will activate the requisite services to the customer. Bidder will submit the confirmation certificate after verifying the services as per request of the customer to the BSNL.
- 3.13. BSNL shall keep providing the HONT, power backup, and splitters to Bidder on a bulk basis periodically, for rollout preferably on a monthly basis. Further, Bidder shall also maintain minimum numbers of assets with itself to ensure that day-to-day sales activity are not hampered.
- 3.14. Initially the power back up with battery will be provided by BSNL. Maintenance of battery including replacement will be the responsibility of the customer. On expiry of warranty period for power back up, ONTs and splitters supplied by the BSNL, the maintenance responsibility rests with FSP for all such accessories. FSP may have to enter into AMC with suitable agencies.
- 3.15. The FSP shall also act as a single window for various customer related queries including after sale support. The FSP shall coordinate with BSNL for the same.

Section-6

Undertaking and Declaration

6(A) - For understanding the terms & condition of Tender & Spec. of work

a) Certified that:

1. I/ We have read, understood and agree with all the terms and conditions, specifications included in the tender documents & offer to execute the work at the rates quoted by us in the tender form.
2. If I/ We fail to enter into the agreement & commence the work in time, the EMD/ SD deposited by us will stand forfeited to the BSNL.

b) The tenderer hereby covenants and declares that:

1. All the information, Documents, Photo copies of the Documents/ Certificates enclosed along with the Tender offer are correct.
2. If anything is found false and/or incorrect and/or reveals any suppression of fact at any time, BSNL reserves the right to debar our tender offer/ cancel the LOA/ Purchase/ work order if issued and forfeit the EMD/ SD/ Bill amount pending with BSNL. In addition, BSNL may debar the contractor from participation in its future tenders.

Date:

.....

Signature of Tenderer

Place:

Name of Tenderer

Along with date & Seal

6 (B) NEAR-RELATIONSHIP CERTIFICATE

(Format of the Certificate to be given as per the clause 27 of Section-4 Part-A by the bidder in respect of status of employment of his/ her near relation in BSNL)

The format of the certificate to be given is "*I.....s/o.....r/o.....hereby certify that none of my relative(s) as defined in the tender document is/are employed in BSNL unit as per details given in tender document. In case at any stage, it is found that the information given by me is false/ incorrect, BSNL shall have the absolute right to take any action as deemed fit/without any prior intimation to me.*"

Signature of the tenderer

With date and seal

Section-7

PROFORMA

7(A) For the BIDSECURITY/ EMD Guarantee

(To be typed on Rs.100/- non-judicial stamp paper)

Sub: Bid Security/EMD guarantee.

Whereas M/s R/o
(Hereafter referred to as Bidder) has approached us for giving Bank Guarantee of Rs./- (hereafter known as the "B. G. Amount") valid up to/...../ 20.... (hereafter known as the "Validity date") in favour of DGM (MMT) BSNL CO, Delhi (Hereafter referred to as BSNC) for participation in the tender of work of vide tender no.

Now at the request of the Bidder, We BankBranch having (Address) and Regd. office address as (Hereinafter called 'the Bank') agrees to give this guarantee as hereinafter contained:

2. We the Bank do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BSNC stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the BSNC by reason of breach by the said bidder(s) of any of terms or conditions contained in the said Agreement or by reason of the bidder (s) failure to perform the said Agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee where the decision of the BSNC in these counts shall be final and binding on the bank. However, our liability under this guarantee shall be restricted to an amount not exceeding the "B. G. Amount".
3. We undertake to pay to the BSNC any money so demanded notwithstanding any dispute or disputes raised by the bidder(s) in any suit or proceeding before any court or tribunal relating thereto our liability under this present being absolute and unequivocal. The Payment so made by us under this bond shall be valid discharge of our liability for payment there under and the bidder(s) shall have no claim against us for making such payment.
4. We the Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the BSNC under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till BSNC Certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said bidder(s) and accordingly discharge this guarantee. Unless a demand or claim under this guarantee

is made on us in writing or before the expiry of Validity date from the date hereof, we shall be discharged from all liability under this guarantee thereafter.

5. We the Bank further agree with the BSNC that the BSNC shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said bidder(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the BSNC against the said bidder(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Bidder(s) or for any forbearance, act or omission on the part of the BSNC or any indulgence by the BSNC to the said bidder(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. Notwithstanding anything herein contained ;
 - (a) The liability of the Bank under this guarantee is restricted to the "B. G. Amount" and it will remain in force up to its Validity date specified above.
 - (b) The guarantee shall stand completely discharged and all rights of the BSNC under this Guarantee shall be extinguished if no claim or demand is made on us in writing on or before its validity date.
7. In case BSNC demands for any money under this bank guarantee, the same shall be paid through banker's Cheque in favour of "AO (Cash) BSNL CO" payable at New Delhi.
8. The Bank guarantees that the below mentioned officer who have signed it on behalf of the Bank have authority to give this guarantee under its delegated power.

Place:

Date:

(Signature of the Bank Officer)

Rubber stamp of the bank

Authorized Power of Attorney Number:

Name of the Bank officer:

Designation:

Complete Postal address of Bank:

.....

Telephone Numbers

Fax numbers

7(B) For the Performance Guarantee

(To be typed on Rs.100/- non-judicial stamp paper)

Dated:.....

Sub: Performance guarantee.

Whereas DGM (MM) BSNL CO, Delhi R/o
.....(hereafter referred to as BSNC) has issued an APO no. Dated
...../...../20.... awarding the work of to M/s
..... R/o (hereafter
referred to as "Bidder") and BSNC has asked him to submit a performance guarantee in
favour of DGM(MMT) BSNL CO, Delhi of Rs./- (hereafter referred to as "P.G.
Amount") valid up to/...../20.....(hereafter referred to as "Validity Date")

Now at the request of the Bidder, We Bank
.....Branch having
(Address) and Regd. office address as
..... (Hereinafter called
'the Bank') agreed to give this guarantee as hereinafter contained:

2. We, "the Bank" do hereby undertake and assure to the BSNC that if in the opinion of the BSNC, the Bidder has in any way failed to observe or perform the terms and conditions of the said agreement or has committed any breach of its obligations there-under, the Bank shall on demand and without any objection or demur pay to the BSNC the said sum limited to P.G. Amount or such lesser amount as BSNC may demand without requiring BSNC to have recourse to any legal remedy that may be available to it to compel the Bank to pay the same.
3. Any such demand from the BSNC shall be conclusive as regards the liability of Bidder to pay to BSNC or as regards the amount payable by the Bank under this guarantee. The Bank shall not be entitled to withhold payment on the ground that the Bidder had disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between Bidder and BSNC regarding the claim.
4. We, the Bank further agree that the guarantee shall come into force from the date of its issue and shall remain in full force and effect up to its Validity date.
5. The Bank further agrees that the BSNC shall have the fullest liberty without the consent of the Bank and without affecting in any way the obligations hereunder to vary any of the terms and conditions of the said agreement or to extend the time for performance of the said agreement from any of the powers exercisable by BSNC against the Bidder and to forebear to enforce any of the terms and conditions relating to the said agreement and the Bank shall not be relieved from its liability by reason of such failure or extension being granted to Bidder or through any forbearance, act or omission on the part of BSNC or any indulgence by BSNC to Bidder or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of relieving or discharging the guarantor.

6. Notwithstanding anything herein contained ;
 - (a) The liability of the Bank under this guarantee is restricted to the P.G. Amount and it will remain in force up to its Validity date.
 - (b) The guarantee shall stand completely discharged and all rights of the BSNC under this Guarantee shall be extinguished if no claim or demand is made on us in writing on or before its validity date.
7. In case BSNC demands for any money under this bank guarantee, the same shall be paid through banker's Cheque in favour of "AO (Cash) BSNL CO" payable at New Delhi.
8. The Bank guarantees that the below mentioned officer who have signed it on behalf of the Bank have authority to give this guarantee under its delegated power.

Place:

Date:

(Signature of the Bank Officer)

Rubber stamp of the bank

Authorized Power of Attorney Number:

Name of the Bank officer:

Designation:

Complete Postal address of Bank:

.....

Telephone Numbers

Fax numbers

Section-8

Bidder's Profile & Questionnaire
(To be filled in and submitted by the Bidder)

A) Bidder's Profile

- 1. Name of the Individual/ Firm:
- 2. Present Correspondence Address
-
.....
Telephone No. Mobile No. FAX No.
.....
- 3. Address of place of Works/ Manufacture
-
Telephone No. Mobile No.
- 4. State the Type of Firm: Sole proprietor-ship/partnership firm / (Tick the correct choice): Private limited company.
- 5. Name of the sole proprietor/ partners/ Director(s) of Pvt. Ltd Co.:

S. No.	Name	Father's Name	Designation
1.			
2.			
3.			
4.			
5.			

- 6. Name of the person authorized to enter into and execute contract/ agreement and the capacity in which he is authorized (in case of partnership/ private Ltd company):
.....
.....
- 7. Permanent Account No. :
- 8. Details of the Bidder's Bank for effecting e-payments:
 - (a) Beneficiary Bank Name:.....
 - (b) Beneficiary branch Name:.....
 - (c) IFSC code of beneficiary Branch.....
 - (d) Beneficiary account No.:.....
 - (e) Branch Serial No. (MICR No.):.....

9. Whether the firm has Office/ works (i.e. manufacture of the tendered item) in Delhi?
If so state its Address

.....
.....

B) Questionnaire

1. Do you think any other detail/ material is required to complete the work specified in the specification? Yes/ No.

1.1 If Yes, Give details

.....
.....

2. Do you think any other item of work need be included in tender form to complete the work specified in the specification? Yes/ No.

2.1 If Yes, Give details

.....
.....

3. Kindly indicate the maximum Quantity of tendered material which you are capable of supplying within the scheduled delivery period.

Name of the tendered Item	Qty that can be supplied by the firm within scheduled delivery period.

4. Suggestion for improvement of the tender document.

.....
.....
.....

Place.....

Signature of contractor

Date

Name of Contractor

**Section- 9
PART-A
BID Form**

Dated: dd.mm.yyyy.

From

.....
.....
.....
.....

To

AGM (MMY), BSNL CO,
IInd Floor, Bharat Sanchar Bhawan,
HCM Lane, Janpath,
New Delhi-110001

EOI No.

Date:

Dear Sir,

1. Having examined the conditions of contract and specifications including addenda Nos.....the receipt of which is hereby duly acknowledged, we agree to abide by all the terms and conditions of this EOI.
2. If our Bid is accepted, we will obtain the performance guarantees of a Nationalized Scheduled Bank's Delhi Branch as per clause of 2 of Section 5 Part A of this EOI document.
3. We agree to abide by this Bid for a period of **180 days** from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
4. Until a formal Acceptance Letter of Contract is prepared and executed, this Bid together with your written acceptance thereof in your notification of award shall constitute a binding contract between us.
5. Bid submitted by us is properly sealed and prepared so as to prevent any subsequent alteration and replacement.
6. We understand that you are not bound to accept the highest or any bid, you may receive.
7. We understand that the Bid document so submitted is the true copy of BSNL EOI documents available on the ETS portal of M/s TCIL (<https://www.tcil-india-electronictender.com>) E-tendering Portal. Any deviation will result in the rejection of the bid.

Dated this day of 20

Name and Signature

In the capacity of.....

Duly authorized to sign the bid for and on behalf of.....

Witness.....

Address.....

Signature.....

**Section-9
PART B**

Financial proposal (Bid) B1

Zone-1 (CoveringTelecom circles)

I/ We/ M/s.....offer following Revenue share (in %) net of all statutory levies like License Fee, Service Tax, commissions etc. (up to two decimal places) to BSNL, on the realized revenue from FTTH broadband/Voice services:

S. No.	Item	Minimum Revenue share to be offered to BSNL	Revenue share offered to BSNL (in %) up to two decimal places* (minimum to	Revenue share offered to BSNL (in %) expressed in words
1	Revenue share (in %) net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc (up to two decimal places) on the realized revenue from Voice and Broadband services being provided by BSNL on its own (excluding revenue from Leased lines and other VAS services provided by BSNL in partnership with other VAS providers).	80% (Minimum to be quoted)		

We have taken Note of the following:

- 1. Minimum Revenue share to be quoted for offering to BSNL is 80%.**
- For Leased line and value added services (VAS, which are being offered by BSNL in partnership with other VAS providers) provided over FTTH, FSP shall get a revenue share equal to 10% of his quoted share of revenue for Voice and BB services net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc.
- * The revenue share % shall be limited to 2 decimal points only. Any figure after 2 decimal points shall be ignored for all purpose.

4. In case of variation between revenue share % mentioned in figures & words, the Revenue share % mentioned in words shall prevail.
5. The revenue share offered to BSNL is net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc. (up to two decimal places) on the realized revenue from Voice, broadband and other VAS over FTTH (excluding revenue from Leased lines).
6. Revenue share will remain same throughout the agreement period.

(Signature of Authorized Signatory)
Name.....

Official Seal

Financial proposal (Bid) B2

Zone-2 (CoveringTelecom circles)

I/ We/ M/s.....offer following Revenue share (in %) net of all statutory levies like License Fee, Service Tax, commissions etc. (up to two decimal places) to BSNL, on the realized revenue from FTTH broadband/Voice services:

S. No.	Item	Minimum Revenue share to be offered to BSNL	Revenue share offered to BSNL (in %) up to two decimal places* (minimum to	Revenue share offered to BSNL (in %) expressed in words
1	Revenue share (in %) net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc (up to two decimal places) on the realized revenue from Voice and Broadband services being provided by BSNL on its own (excluding revenue from Leased lines and other VAS services provided by BSNL in partnership with other VAS providers).	80% (Minimum to be quoted)		

We have taken Note of the following:

1. **Minimum Revenue share to be quoted for offering to BSNL is 80%.**
2. For Leased line and value added services (VAS, which are being offered by BSNL in partnership with other VAS providers) provided over FTTH, FSP shall get a revenue share equal to 10% of his quoted share of revenue for Voice and BB services net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc.
3. * The revenue share % shall be limited to 2 decimal points only. Any figure after 2 decimal points shall be ignored for all purpose.
4. In case of variation between revenue share % mentioned in figures & words, the Revenue share % mentioned in words shall prevail.

5. The revenue share offered to BSNL is net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc. (up to two decimal places) on the realized revenue from Voice, broadband and other VAS over FTTH (excluding revenue from Leased lines).
6. Revenue share will remain same throughout the agreement period.

(Signature of Authorized Signatory)
Name.....

Official

Seal

Financial proposal (Bid B3

Zone-3 (CoveringTelecom circles)

I/ We/ M/s.....offer following Revenue share (in %) net of all statutory levies like License Fee, Service Tax, commissions etc. (up to two decimal places) to BSNL, on the realized revenue from FTTH broadband/Voice services:

S. No.	Item	Minimum Revenue share to be offered to BSNL	Revenue share offered to BSNL (in %) up to two decimal places* (<u>minimum to be quoted is 80%</u>)	Revenue share offered to BSNL (in %) expressed in words
1	Revenue share (in %) net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc (up to two decimal places) on the realized revenue from Voice and Broadband services being provided by BSNL on its own (excluding revenue from Leased lines and other VAS services provided by BSNL in partnership with other VAS providers).	80% (Minimum to be quoted)		

We have taken Note of the following:

- 1. Minimum Revenue share to be quoted for offering to BSNL is 80%.**
2. For Leased line and value added services (VAS, which are being offered by BSNL in partnership with other VAS providers) provided over FTTH, FSP shall get a revenue share equal to 10% of his quoted share of revenue for Voice and BB services net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc
3. * The revenue share % shall be limited to 2 decimal points only. Any figure after 2 decimal points shall be ignored for all purpose.

4. In case of variation between revenue share % mentioned in figures & words, the Revenue share % mentioned in words shall prevail.
5. The revenue share offered to BSNL is net of all statutory Taxes & levies like License Fee, Service Tax, commissions etc. (up to two decimal places) on the realized revenue from Voice, broadband and other VAS over FTTH (excluding revenue from Leased lines).
6. Revenue share will remain same throughout the agreement period.

(Signature of Authorized Signatory)
Name.....

Official Seal

Annexure I

Details of Cities, capacity allocation and Technology

SI No	BSNL Telecom Circle	City Name	Capacity	Technology (GPON or GEPON)
1	Chhattisgarh	Raipur	9280	GPON
2		Durg	6400	GPON
3		Bilaspur	640	GPON
4		Korba	640	GPON
5		Raigarh	640	GPON
6		Ambikapur	320	GPON
7		Jagaldpur	320	GPON
8	Gujarat	Ahmadabad	19200	GPON
9		Anand	640	GPON
10		Baroda(Vadodra)	2560	GPON
11		Mehsana	320	GPON
12		Kalol	320	GPON
13		Kadi	320	GPON
14		Patan	320	GPON
15		Morbi	320	GPON
16		Gondal	320	GPON
17		Dahej	320	GPON
18		Rajkot	640	GPON
19		Surat	2880	GPON
20	Maharashtra	Pune	9280	GPON
21		Nagpur	8000	GPON
22		Amarawati	2880	GPON
23		Solapur	3200	GPON
24		Ahmadnagar	3200	GPON
25		Aurangabad	2240	GPON
26		Dhule	1280	GPON
27		Goa	4160	GPON
28		Kalyan	3840	GPON
29		Kolhapur	2880	GPON
30		Nasik	2560	GPON
31		Nanded	640	GPON

32		Sangli	320	GPON
33		Jalgoan	640	GPON
34		Miraj	320	GPON
35	Madhya Pradesh	Indore	3840	GPON
36		Bhopal	3200	GPON
37		Ujjain	1280	GPON
38		Rewa	960	GPON
39		Morena	640	GPON
40		Kharghoan	960	GPON
41		Chhattarpur	640	GPON
42		Khujraho	320	GPON
43		Dewas	960	GPON
44		Mandesaur	1280	GPON
45		Gwalior	2240	GPON
46		Jabalpur	1920	GPON
47		Sagar	960	GPON
48		Katni	320	GPON
49		Bhind	320	GPON
50		Seopur	320	GPON
51	Andhra Pradesh	Hydrabad	30400	GPON
52		Vijayawada	5120	GPON
53		Kakinara	320	GPON
54		Guntur	640	GPON
55		Adilabad	640	GEPON
56		Anantpur	640	GEPON
57		Eluru	640	GEPON
58		Nellore	1280	GEPON
59		Rajahmundary	640	GEPON
60		Tirupathi	640	GEPON
60		Visakhapatnam	2560	GEPON
62		Warangal	640	GEPON
63	Kerala	Ernakulam	16320	GPON
64		Kalikat	3840	GEPON
65		Kannaur	2560	GEPON
66		Trichur	4480	GEPON
67		Trivandrum	1920	GEPON
68	Karnataka	Banglore R	46080	GPON

69		Banglore		GPON
70		Manglore	16000	GPON
71		Belgaum	640	GEPON
72		Hubli& Dharwad	2560	GEPON
73		Karwar	640	GEPON
74		Mysore	2560	GEPON
75		Raichur	640	GEPON
76	Tamilnadu	Coimbatore	12480	GPON
77		Madurai	1280	GEPON
78		Pondicherry	640	GEPON
79		Salem	640	GEPON
80		Trichy	1280	GEPON
81		Vellore	640	GEPON
82	Chennai-TD	Chennai TD	36160	GPON
83		Kancheepuram	960	GPON
84		Tiruvallur	640	GPON
85	UP(W)	Noida, Greater NOIDA	21120	GPON
86		Meerut	5440	GPON
87		Mathura	1920	GPON
88		Muzzafar Nagar	1920	GPON
89		Aligarh	1920	GPON
90		Saharnpur	1920	GPON
91		Bareilly	1920	GPON
92		Agra	6400	GEPON
93		Ghaziabad	7040	GEPON
94		Muradabad	640	GEPON
95	Uttaranchal	U.S. Nagar	640	GEPON
96		Haridwar	640	GEPON
97		Haldwani	640	GPON
98		Roorkee	640	GPON
99		Dehradoon	2560	GEPON
100	UP (E)	Lucknow	19200	GPON
101		Kanpur	10880	GPON
102		Farrukhabad	1280	GPON
103		Sultanpur	1280	GPON
104		Raibarelli	1280	GPON
105		Faizabad	1920	GPON

106		Azamgarh	1920	GPON
107		Mirzapur	1920	GPON
108		Allahabad	3200	GEPON
109		Gorakhpur	3200	GEPON
110		Jhansi	1280	GEPON
111		Varanasi	3200	GEPON
112	Haryana	Gurgaon	16640	GPON
113		Jind	640	GPON
114		Hissar	2560	GPON
115		Sirsa	1600	GPON
116		Rewari	1920	GPON
117		Rohtak	1280	GPON
118		Sonapat	1280	GPON
119		Amballa	1280	GEPON
120		Yamuna Nagar	1280	GEPON
121		Karnal	1280	GEPON
122		Panipat	1280	GEPON
123		Faridabad	14080	GPON
124		Rajasthan	Jaipur	35520
125	Ajmer		1280	GEPON
126	Alwar		3840	GEPON
127	Jodhpur		1920	GEPON
128	Kota		1280	GEPON
129	Udaipur		1280	GEPON
130	Punjab	Chandigarh	16320	GPON
131		Jalandhar	20160	GPON
132		Amritsar	5120	GEPON
133		Ferozpur	1920	GEPON
134		Ludhiana	6400	GEPON
135		Patiala & SSA	4800	GEPON&GPON
136		Sangrur	2560	GEPON
137		Himachal Pradesh	Simla	960
138	Solan		640	GPON
139	Nalagarh		320	GPON
140	Baddi		320	GPON
141	Barotiwala		320	GPON
142	Bilaspur		640	GPON

143	Jammu & Kashmr	Jammu	640	GEPON
144		Sri Nagar	320	GPON
145	Kol-TD	Kolkata	40640	GPON
146	Orissa	Bhubeneshwar	7360	GPON
147		Rourkele	640	GEPON
148		Sambalpur	640	GEPON
149	West Bengal	Durgapur	640	GEPON
150		Siliguri	640	GEPON
151		Haldia	640	GEPON
152		Asansol	640	GEPON
153	Bihar	Patna	17280	GPON
154	Jharkhand	Ranchi	12480	GPON
155		Bokaro	1280	GEPON
156		Dhanbad	640	GEPON
157		Jamshedpur	640	GEPON
158	Andaman& Nicobar	Port Blair	640	GEPON
159	Assam	Gowahati	2880	GPON
160	North East-I	Agartalla	640	GEPON
161	North East-I	Shilong	640	GEPON

Number of cities and capacity of the city may change as per the requirement of BSNL

**Consortium Agreement
(On non-judicial stamp paper of appropriate value)**

In compliance to **Clause No.of EOI No. dated**, a consortium has been formed on **<Date>** between **<Bidder's Name>** and various technology providers to meet various eligibility criteria specified in the EOI under reference.

It has been agreed amongst all the consortium members that **<Bidder's Name>** is designated to submit the Bid on behalf of this consortium and henceforth called as Bidder. It is also confirmed that all the members of the said consortium meet the eligibility conditions as specified in the above referred EOI and have authorized the lead bidder by way of duly executed power of attorney in his favour to act on their behalf ("Lead bidder" and "bidder" has been used interchangeably).

It has also been agreed that the in its capacity as Bidder, **<Bidder's Name>** shall interact with BSNL for all obligations,

The Lead bidder and its technology/consortium partner shall be liable for due performance of the contract jointly and severally, whereas the responsibility of Consortium Partners other than lead bidder, shall be limited to such Consortium Partner's share of obligations in the contract for products and /or services as defined in the agreements signed between the Lead Bidder and Consortium Partner and in accordance with the proposal submitted by the Consortium Partner to the Lead Bidder. Copies of all such agreements shall form part of the consortium agreement.

The details of Bidder and various and consortium partners are as under:-

<Bidder Name>:- <Details containing Registered office & correspondence address>

<Consortium Partner 1>:- <Details containing Registered office & correspondence address>

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IN WITNESS WHEREOF the parties have caused this AGREEMENT to be executed by their duly authorized officers as of the day first above written

For <Bidder's Name> Signature of Authorized Signatory Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1	For <Consortium Partner-1> Signature of Authorized Signatory Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1
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Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:-	Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:-
For <Consortium Partner-2> Signature of Authorized Signatory Name:- Designation:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:-	For <Consortium Partner-3> Signature of Authorized Signatory Name:- Designation:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:- Witness-1 Signature:- Name:- Designation:- Contact Phone:- Email-ID:- Date:-

Indicative Construction Practices

(FSP can also adopt better practices as per latest trends adopted in the Market)

1. Type and models of buildings and associated works

The FTTH GPON wiring needs to be done at various categories of Projects as below:

- 1.1. **Green Field Projects:** BSNL plans to deploy the FTTH in many upcoming residential complexes which are under construction or nearing completion. These Projects are classified as Green Field environments. The FSP needs to closely co-ordinate with the Builder / Promoter to carryout FTTH wiring in the Project / Building. The FSP can utilize the internal wiring conduits / ducts built by the Builder to the extent permitted by him for GPON wiring. A site-under-construction may have various other civil / electrical works being done simultaneously. The FSP needs to plan and carry out the work suitably such that the project time lines of BSNL as well as the Builder are fully met with. The occupancy by the residents to the green field project could be incremental and may take some time.
- 1.2. **Gray Field Projects:** These are existing large residential complexes, commercial establishments where BSNL Landline, Broadband services are provided. FTTH services may also be offered to the occupants of such complexes. In large number of gray field complexes the cable conduits / ducts may have existing lines hence the FSP needs to plan and deploy the new conduits / ducts accordingly. Adequate precaution needs to be taken by the FSP so that during the work execution none of the existing services are disturbed.

2. Models of Projects:

Both the Green Field Projects and Gray Field projects could have following indicative models of buildings:

- (i) High-rise Apartment complex with single or multiple blocks
- (ii) Medium-rise, Multi block complex
- (iii) Gated community of Villas / Row houses
- (iv) Large township projects comprising mixture of all above
- (v) Commercial / Office / IT complex

3. FTTH GPON/GEPON Deployment

- 3.1. The Gigabit Passive Optical Network (GPON) is the critical component in Fiber To The Home (FTTH) deployment. The structure and stability of the GPON network determines the performance of the FTTH service. The GPON network in the given Project is to be designed by the FSP such that it would cater emerging bandwidth

and service needs in the near future. Some of the services which are already offered by BSNL are

- (i) Voice Telephony Service
- (ii) High speed Internet service (broadband) up to 100 Mbps
- (iii) IPTV

In addition in the near future additional services like Video Surveillance, HDTV service, VOIP service etc., could be offered. In the long run customer internet bandwidths greater than 100 Mbps can also be offered to access various internet based applications.

3.2. The FTTH-GPON network deployed in a project premises should be capable of handling above services. BSNL supplies splitters of various types like 2:32, 2:4, 1:4, 1:8, 1:16 etc., The Splitter ratio plays key factor in ultimate bandwidth achievable, hence following split combination mechanism are suggested.

S.No	Description (Splitter to be connected between OLT and ONT)	Stage-1	Stage-2	Remarks
1	Use of 2:32 Splitter with other Splitter combinations	2:32	Nil	More Preferred
2	Use of 2:4 Splitter with other Splitter combinations	2:4	Either 1:8 or 1:4	More Preferred
3	Use of 1:4 Splitter with other Splitter combinations	1:4	Either 1:8 or 1:4	Less Preferred
4	Use of 2:4 / 1:4 Splitter with other Splitter combinations	2:4 / 1:4	1:16	Less Preferred, to be used only when other splitters are in short-supply

3.3. **GPON/GEPON Deployment**

- (i) Accordingly following GPON deployment models based on type of the Project have been suggested. In all these models it is to be ensured that Optical Fiber, Drop Fiber laid / installed should have adequate protection all thru its run to avoid damage or cut due to accidental hit, rat bites, insect infestation etc.,
- (ii) The FSP can choose to use either Hard PVC pipes or Micro-duct for carrying out GPON wiring. The work description given in the document as PVC may be read as PVC pipe or Micro duct.

3.3.1. **Model 1- High-rise Apartment Complex**

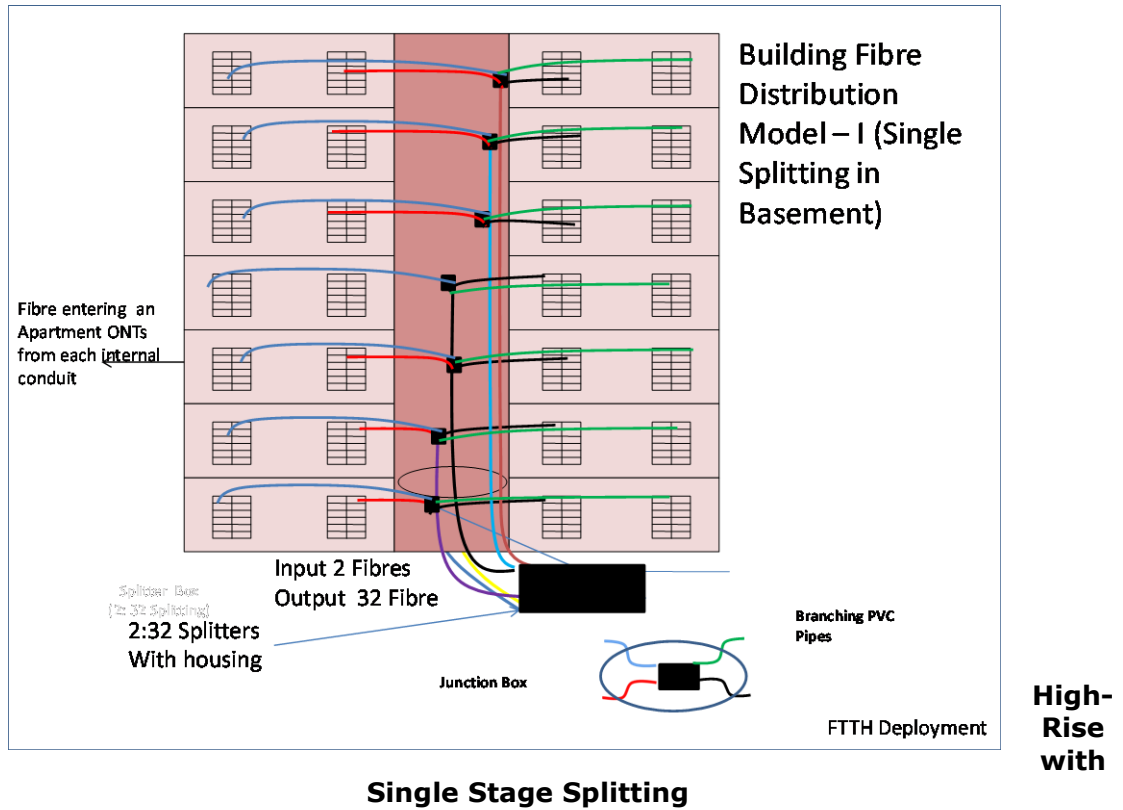
The High-rise Apartments are ranging from 5 floors to 30+ floors. The High-rise complex FTTH-GPON wiring can be done as suggested below.

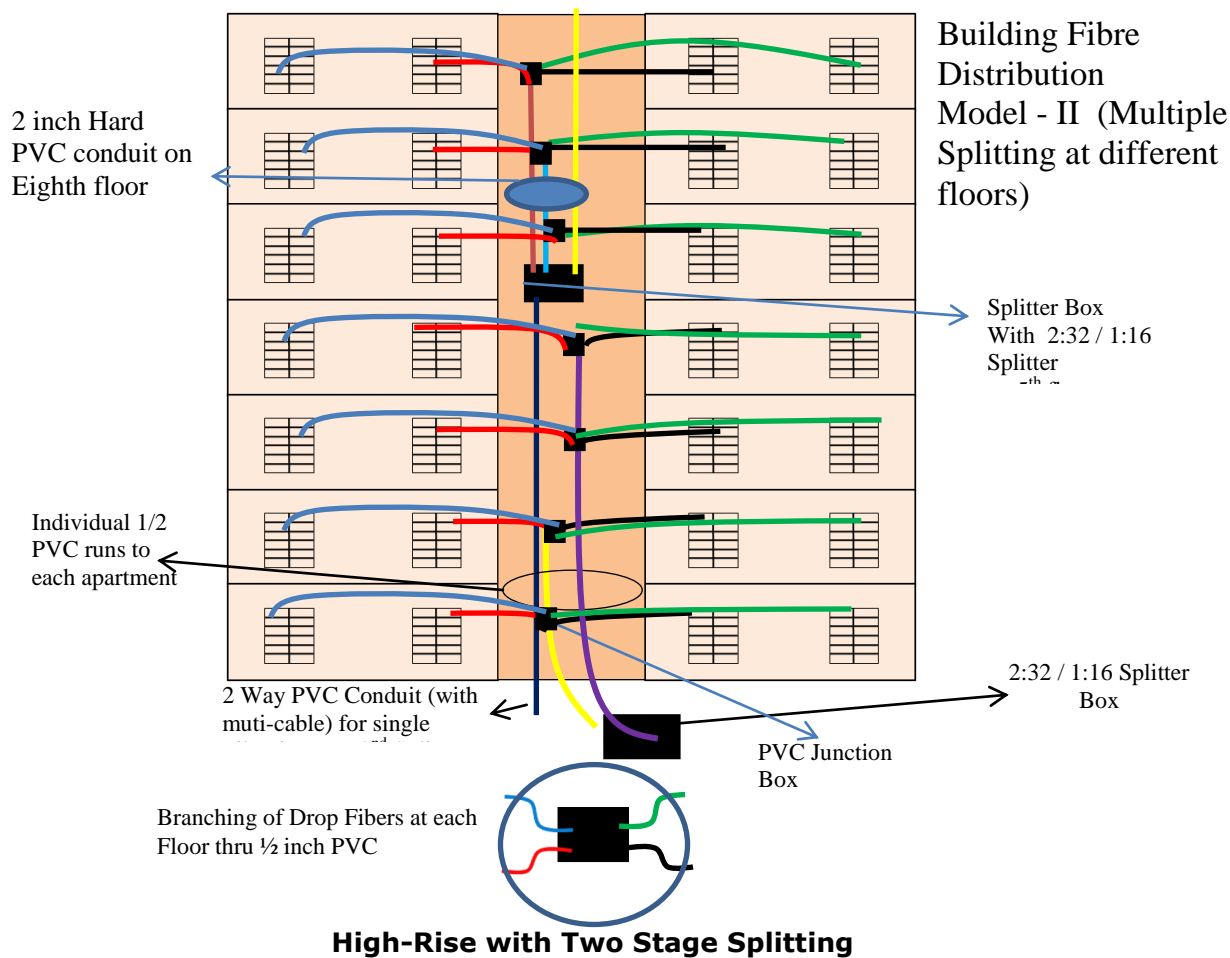
- (i) Based on the number of apartments within a block the network may be designed. Every 32 apartments can be grouped so that either 2:32 or 1:32 splitter can be deployed at a convenient location within the block.

- (ii) The OFC cable of 24F is to be laid from the common termination point in ring fashion to the splitter, so that the OFC reaches in two directions, physically separated from each other. In a multi-block complex it is suggested that the blocks may be connected in ring fashion to achieve the physical diversity.
- (iii) Many of the multi-block complexes would have common parking basement which interlinks all the blocks. The 24F OFC cable to be laid between various blocks with common point in a ring fashion need to be done using Hard PVC pipes. These pipes may be clamped to the ceiling or may be laid on runways if available. Wherever required the FSP needs to put runways for safe carriage of the cable.
- (iv) The Splitter can be located such that its safety is ensured; it is installed properly and covered against any dust, debris, water ingress, rains etc. Though BSNL standard supply Splitter has covering case, it is suggested that FSP may improvise additional casing for ensuring safety and protection. The splitters may be planned from Basement on wards and they can be located one for couple of floors on a higher floor such that the drop fiber laying distance on average is about 50 meters, the longest arm is less than 100 meters.
- (v) The 24 Fiber OFC coming from the common point to the splitter at higher floor needs to be laid in two different pipes in the vertical run so that there is a physical distance of 500 mm between them. Hard PVC pipe of 1.5 inch pipe may be used for this purpose. The OFC needs to be terminated in the suitable splicing kit box.
- (vi) From the Splitter individual Drop fibers need to be run to each apartment. The Drop fiber needs to be run using Hard PVC pipe of 1/2 inch diameter. The bends have to be taken through flexible PVC Hose properly clamped to the Hard PVC pipe. It is to be ensured that the Drop fiber is not exposed anywhere in run between Splitter and the customer ONT.
- (vii) The high-rise building would normally have vertical chutes through which the pipes and cables are to be laid. The FSP needs to plan suitable arrangement for fixing the PVC pipes on the wall either by directly clamping on to the wall or by first installing a ladder and then clamping the pipes on to it. The FSP should ensure that the fitment is done with clamping at every 75 CM distance so that the installation is firm and rugged.
- (viii) In the vertical section (laying through vertical chutes) where ever difficulty is found in laying individual PVC pipes, the FSP can use a single 1 inch / 1.5 inch Hard pipe for up to eight (8) drop fibers so that the density is controlled and at the same time the work is done in safe manner. This work should be limited only to the vertical section and where accessing the entire width of chute is difficult due to floor height, other utility run etc., When such work is carried out both ends in the vertical run of the Drop fiber should have clear indication of the Apartment number and the Splitter port to which it is connected. Branching of Drop fibers at both ends need to be done using suitable junction boxes and flexible PVC pipes.
- (ix) The OFC as well as drop fiber connectors need to be protected from sagging due to cable weight. Since the cable / drop fiber is laid vertically there is probable chance that the weight of the cable / drop fiber is suspended on the connector / Splitter / coupler. This could cause the Connector / Splitter / Coupler to break or disorient there by create maintenance problems. Such problems may be avoided by putting

suitable bush or padding at both the ends of the PVC pipe such the cable makes adequate contact with the bush / padding and there by transfers its weight.

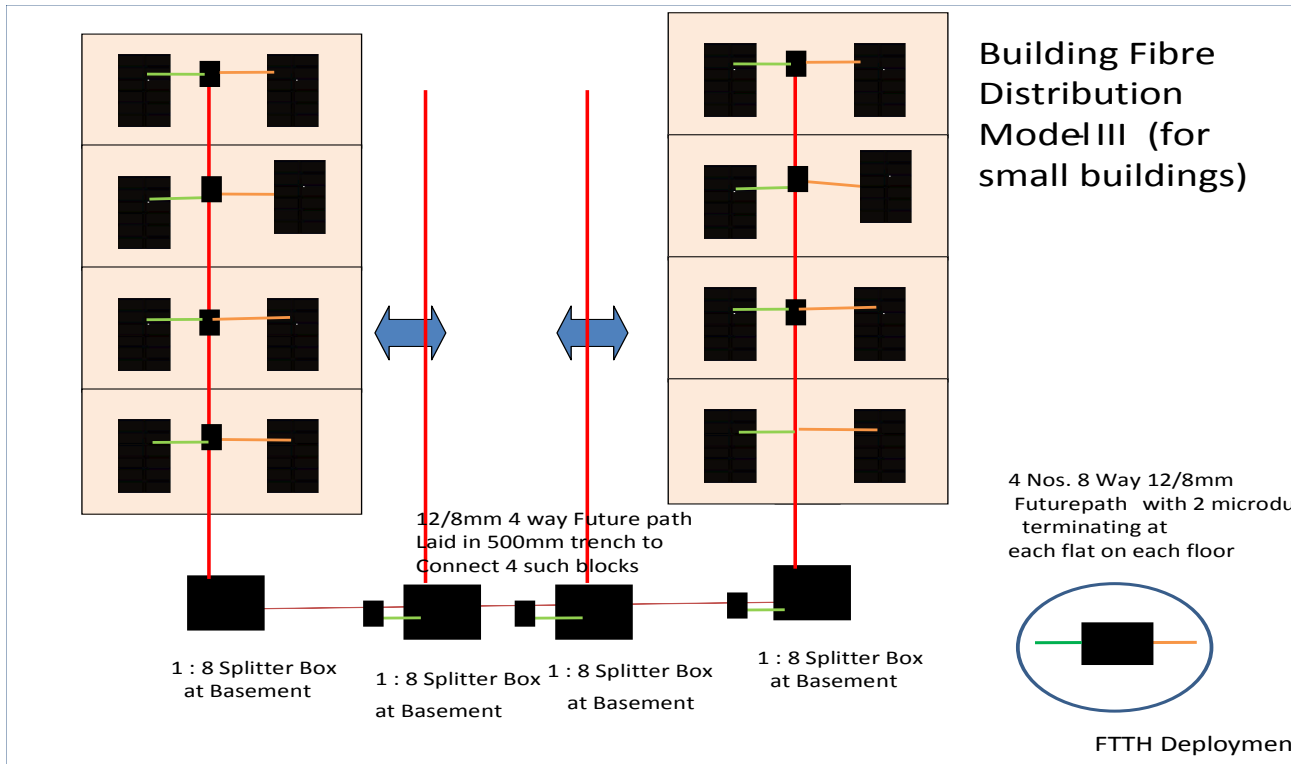
- (x) Drop fiber is easily and smoothly pulled from top to bottom through PVC Pipes from ONT side to Splitter Boxes. Ensure bending radius of OFC to be maximum 20 times the diameter of the OFC cable. FSP shall wire the drop fiber to the drawing hall after taking proper permission of the premise holder and terminate the PVC Pipe and drop fiber at a given location as per the consent of the end customer .However in case present user is not allowing entry of PVC Pipe in such situation with reference to drawing hall, suitable length of Drop fiber (3-5 Meters) will be left in the coil form and at the time of customer demand same will be used by the bidder to terminate at the ONT with termination.





3.3.2. Model-2: Medium Rise – Multi Block Complex

- (i) The medium-rise complexes are generally categorized as up to Four storey multiple buildings in a row or in an area. Based on the number of Apartments within a block the splitter combination needs to be planned.
- (ii) 2:4 / 1:4 splitter will be placed at any one of the building's basement and through Hard PVC pipe of 2 inch three drop fibers would be laid to the basements of other three buildings. While branching out the drop fiber it may be ensured that at no-point of time the fiber is exposed.
- (iii) Wherever it is not possible to take the Hard PVC pipe through common basement / run-thru wall, the Drop fibers need to be taken through buried PLB pipes conforming to OF cable laying standards.



Medium-Rise Multiple Blocks

- (iv) The OFC cable of 24F is to be laid from the common termination point in ring fashion to the splitter, so that the OFC reaches in two directions, physically separated from each other. In a multi-block complex it is suggested that the blocks may be connected in ring fashion to achieve the physical diversity.
- (v) Many of the multi-block complexes would have common parking basement which interlinks all the blocks. The 24F OFC cable to be laid between various blocks with common point in a ring fashion need to be done using Hard PVC pipes. These pipes may be clamped to the ceiling or may be laid on runways if available. Wherever required the FSP needs to put runways for safe carriage of the cable. Wherever it is not possible to take the Hard PVC pipe through common basement / run-thru wall, the 24 F OFC need to be taken through buried PLB pipes conforming to OF cable laying standards.
- (vi) The Splitter can be located such that its safety is ensured; it is installed properly and covered against any dust, debris, water ingress, rains etc. Though BSNL standard supply Splitter has covering case, it is suggested that FSP may improvise additional casing for ensuring safety and protection.
- (vii) The splitters may be planned from Basement on wards and they can be located one for couple of floors on a higher floor such that the drop fiber laying distance on average is about 50 meters, the longest arm is less than 100 meters.
- (viii) From the Splitter individual Drop fibers need to be run to each apartment. The Drop fiber needs to be run using Hard PVC pipe of ½ inch diameter. The bends have to be taken through flexible PVC Hose properly clamped to the Hard PVC pipe. It is to be

ensured that the Drop fiber is not exposed anywhere in run between Splitter and the customer ONT.

- (ix) The FSP needs to plan suitable arrangement for fixing the PVC pipes on the wall either by directly clamping on to the wall or by first installing a ladder and then clamping the pipes on to it. The FSP should ensure that the fitment is done with clamping at every 75 CM distance so that the installation is firm and rugged.
- (x) In the vertical section (laying through vertical chutes) where ever difficulty is found in laying individual PVC pipes, the FSP can use a single 1 inch /1.5 inch Hard pipe for up to eight (8) drop fibers so that the density is controlled and at the same time the work is done in safe manner. This work should be limited only to the vertical section and where accessing the entire width of chute is difficult due to floor height, other utility run etc., When such work is carried out both ends in the vertical run of the Drop fiber should have clear indication of the Apartment number and the Splitter port to which it is connected. Branching of Drop fibers at both ends need to be done using suitable junction boxes and flexible PVC pipes.
- (xi) The OFC as well as drop fiber connectors need to be protected from sagging due to cable weight. Since the cable / drop fiber is laid vertically there is probable chance that the weight of the cable / drop fiber is suspended on the connector / Splitter / coupler. This could cause the Connector / Splitter / Coupler to break or disorient there by create maintenance problems. Such problems may be avoided by putting suitable bush or padding at both the ends of the PVC pipe such the cable makes adequate contact with the bush / padding and there by transfers its weight.
- (xii) Drop fiber is easily and smoothly pulled from top to bottom through PVC Pipes from ONT side to Splitter Boxes. Ensure bending radius of OFC to be maximum 20 times the diameter of the OFC cable.
- (xiii) FSP shall wire the drop fiber to the drawing hall after taking proper permission of the premise holder and terminate the PVC Pipe and drop fiber at a given location as per the consent of the end customer .However in case present user is not allowing entry of PVC Pipe in such situation with reference to drawing hall, suitable length of Drop fiber (3-5 Meters) will be left in the coil form and at the time of customer demand same will be used by the bidder to terminate at the ONT with termination.

3.3.3. Model-3: Villas / Row Houses

- (i) The villas / row houses are categorized as houses that have single units spread across a geographical area in a gated community. These houses are premium class of residences hence potential demand for FTTH services are high.
- (ii) Such complex needs extensive laying of under-ground cable, the underground cable of 24F capacity need to be laid. In large projects multiple run of cable may be required or higher capacity cable like 96F may be utilized.
- (iii) The houses can be grouped in 32, such group can be further divided into 4 small groups of 8 each. At the central point 2:4 /1:4 splitter will be placed at any one of the building's wall or a roadside Pillar may be erected in which the splitter would be installed.

- (iv) The FSP need to fabricate Pillar / Mini-Pillar for housing the OFC joints, Splitters. The Pillar need to be custom designed based on the availability of space in the installation site. The builder may either give road-side open space or one of the common walls where installation of Pillar / Mini-pillar is required.
- (v) In the Projects of Villa / Row house type, it is assumed that the splitters housed in Pillar / Mini-pillar are to be installed in open area / on a open wall which is subject to atmospheric effects. The Splitter can be located such that its safety is ensured; it is installed properly and covered against any dust, debris, water ingress, rains etc. The FSP need improvise casing of the pillar and additional protection to the splitter for ensuring safety and protection.
- (vi) The 24F cable from the common point needs to be laid in loop fashion to all the 2:4 / 1:4 couplers located in the project. For this purpose to the extent possible services trench constructed by the builder may be used.
- (vii) While utilizing the service duct of the builder, it may be ensured that the PLB pipe / Hard PVC pipe is firmly laid and fastened to the side wall of the duct. It is to be ensured that existing service lines, future service lines would not disturb the OFC alignment.
- (viii) From the OFC pillar the drop fiber through Hard PVC pipe of 1inch three drop fibers would be laid to mini-pillars located in each sub-group. While branching out the drop fiber it may be ensured that at no-point of time the fiber is exposed.
- (ix) Wherever it is not possible to take the Hard PVC pipe through common basement / run-thru wall, the Drop fibers need to be taken through buried PLB pipes conforming to OF cable laying standards.
- (x) The OFC cable of 24F is to be laid from the common termination point in ring fashion to the splitter, so that the OFC reaches in two directions, physically separated from each other. The OFC may be connected in ring fashion from Common point to Splitter-1, Splitter-1 to Splitter-2 such as to achieve the physical diversity.
- (xi) The mini-pillar would have 1:8 splitters from which individual house / villa can be connected. The mini-pillar may be located such that laying distance on average is about 100 meters, the longest arm is less than 200 meters.
- (xii) From the Splitter individual Drop fibers need to be run to each apartment. The Drop fiber needs to be run using Hard PVC pipe of 1/2 inch diameter. The bends have to be taken through flexible PVC Hose properly clamped to the Hard PVC pipe. It is to be ensured that the Drop fiber is not exposed anywhere in run between Splitter and the customer ONT.
- (xiii) The FSP needs to plan suitable arrangement for fixing the PVC pipes on the wall either by directly clamping on to the wall or by first installing a ladder and then clamping the pipes on to it. The FSP should ensure that the fitment is done with clamping at every 75 CM distance so that the installation is firm and rugged.
- (xiv) The OFC as well as drop fiber connectors need to be protected from sagging due to cable weight. Since the cable / drop fiber is laid vertically there is probable chance

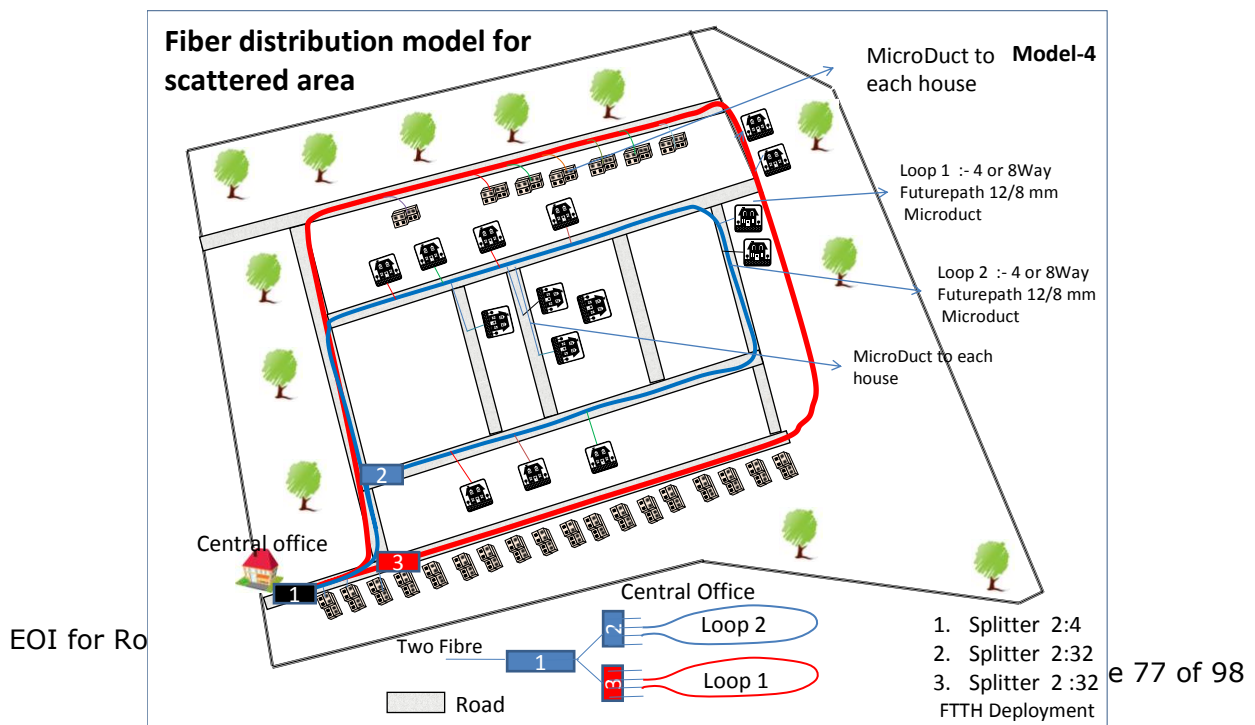
that the weight of the cable / drop fiber is suspended on the connector / Splitter / coupler. This could cause the Connector / Splitter / Coupler to break or disorient there by create maintenance problems. Such problems may be avoided by putting suitable bush or padding at both the ends of the PVC pipe such the cable makes adequate contact with the bush / padding and there by transfers its weight.

- (xv) Drop fiber is easily and smoothly pulled from top to bottom through PVC Pipes from ONT side to Splitter Boxes. Ensure bending radius of OFC to be maximum 20 times the diameter of the OFC cable.
- (xvi) FSP shall wire the drop fiber to the drawing hall after taking proper permission of the premise holder and terminate the PVC Pipe and drop fiber at a given location as per the consent of the end customer .However in case present user is not allowing entry of PVC Pipe in such situation with reference to drawing hall, suitable length of Drop fiber (3-5 Meters) will be left in the coil form and at the time of customer demand same will be used by the bidder to terminate at the ONT with termination.

3.3.4. Model-4: Township Projects

The Township projects are large residential projects. These projects are coming up in various phases and their full occupancy run in thousands. Such wide area GPON installation needs to be planned well so that the network deployed is comprehensive, robust, and has the flexibility to expand. These townships may have all the above types of the residential units, hence GPON deployment should use the appropriate methodology for the specific blocks. In addition the following works need to be carried in a township

- (i) 96F needs to be laid in multiple rings so that individual blocks can be accessed easily from them.
- (ii) Dual ring to be laid to high density areas so that growing demand can be captured with minimum re-wiring in the future.



3.4. FTTH Equipment Installation

- (i) **OLT Installation:** In large Projects, BSNL may install of OLT at the site, otherwise the same will be installed in the nearby exchange.
- (ii) **ONT Installation:** The ONT to be installed within the customer premises at a convenient location from where customer can have connectivity for telephone, High speed internet broadband service and optional IPTV service. Based on the Apartment layout and appliance locations the ONT need to be installed. The ONT preferably to be mounted on the wall, the connected cables needs to be crimped and terminated. The ONT is supplied along with a Power-pack which needs to be installed at customer premises.
- (iii) BSNL shall supply core items like OLT, SMPS Power Supply, Battery Bank, OF termination boxes, Splitters, ONTs, Power-packs which are the standard accessories supplied along with BSNL FTTH equipment.
- (iv) Any additional material required for completing the ONT installation like cable patch-cords (be it telephone cable, Ethernet cable or power cable), piping, termination clips, sockets, plugs etc., needs to be supplied and installed by the FSP at his own cost.
- (v) **OFC Termination:** The optical cable termination in the WSJ kit supplied by BSNL needs to be done by the FSP. The termination to be done by the splicing machine in professional manner. The insertion loss due to splice joint should be less than 0.25 dB.
- (vi) **Drop Fiber Termination:** The Drop fiber laid between the Splitter and the customer location need to be terminated using crimp joint connectors. The crimping should be done such that the connector holds the cable firmly. The insertion loss due to splice joint should be less than 0.25 dB.
- (vii) **Optional Fitments:** FTTH offers multiple services, hence the customer may need additional features and facilities on the FTTH line and wiring from ONT into more than one room. Following are the Options which can be provided to the customer and FSP may charge from the customers directly:
 - a. **Ethernet Wiring to all rooms:** Builder / Individual customers may ask for extending Ethernet wiring to all rooms from the ONT. This facilitates them to access internet service from all the rooms as well has avail IPTV facility in the room of their choice. Against such request FSP shall supply required Cat-5 cable, pull the same thru existing internal conduits and terminate the cables. The Cat-5 cable to be laid in star-fashion so that simultaneous usage from all the rooms is possible. The cable laid to be maintained against any faults during the period of the agreement.

4. Laying of OFC cable, Lead-in Feeder Cable from Common Point to Splitters

4.1. Location and Alignment of the Trench:

- (i) The trench will normally follow the foot-path of the road except where it may have to come to the edge of the carriage way when cutting across road/Boring with specific

permissions from the Local authorities/ concerned Builder / Association / maintaining the road. At road crossing, trenching is to be done by cutting asphalt layer or by boring.

- (ii) The alignment of the trench needs to be planned ahead. While marking the alignment only the centre line will be marked and the contractor shall set out all other work to ensure that, the excavated trench is as straight as possible. The line up of the trench must be such that PLB pipe(s) shall be laid in a straight. line, both laterally as well as vertically except at locations where it has to necessarily take a bend because of change in the alignment or gradient of the trench, subject to the restrictions mentioned elsewhere.

4.2. **Method of Excavation:**

- (i) The contractor shall resort to use of manual labour only to ensure no damage is caused to any underground or surface installations belonging to other public utility services and/or private parties.
- (ii) All excavation operations shall include excavation and getting out. ' Getting out' shall include throwing the excavated materials at a distance of at least one metre or half the depth of excavation, whichever is more clear off the edge of excavation. In all other cases getting out' shall include depositing the excavated materials to designated dumping yards as specified by Local Authorities.
- (iii) Trenching shall as far as possible be kept ahead of the laying of pipes. Contractor shall exercise due care that the soil from trenching intended to be loose for back filling is not mixed with loose debris. While trenching, the contractor should not cause damage to any underground installations belonging to other agencies and any damage caused should be made good at his own cost and expense.
- (iv) Necessary barricades, night lamps, warning boards and required watchman shall be provided by the contractor to prevent any accident to pedestrians or vehicles.. The contractor shall employ sufficient man-power for this with caution boards, flags, sign writings etc.
- (v) The contractor should provide sufficient width at the trench at all such places, where it is likely to cave in due to soil conditions without any extra payment. A minimum free clearance of 15 cm. should be maintained above or below any existing underground installations. No extra payment will be made towards this.
- (vi) In order to prevent damage to PLB pipes over a period of time, due to the growth of trees, roots, bushes, etc., the contractor shall cut them when encountered in the path of alignment of trench without any additional charges.

4.3. **Depth and size of the Trench**

- (i) The depth of the trench from top of the surface shall not be less than 165 cms unless otherwise relaxation is granted by competent authority under genuine circumstances. In rocky terrain, the depth of the trench may be restricted to a depth of 100 to 140 cms. However, Engineer-in-charge in exceptional cases due to adverse site conditions encountered may allow laying PLB pipes at a lesser depth with additional protection. In all cases, the slope of the trench shall not be less than 15 degrees with the horizontal surface. The width of the trench shall normally be 45 cms at the top and 30

cms. at the bottom. In case, additional pipes (PLB/ GI/ RCC pipes) are to be laid in some stretches, the same shall be accommodated in this normal size trench.

- (ii) When trenches are excavated in slopes, uneven ground, inclined portion, the lower edge shall be treated, as top surface of land and depth of trench will be measured accordingly. In certain locations, such as uneven ground, hilly areas and all other places, due to any reason whatsoever it can be ordered to excavate beyond standard depth of 165 cms to keep the bed of the trench as smooth as possible. Near the culverts, both ends of the culverts shall be excavated more than 165 cms to keep the gradient less than 15 degree with horizontal. For additional depth in excess of 165 cms, additional payment of pro rata basis shall be applicable.

4.4. Laying of PLB Pipes

- (i) After the trench is excavated to the specified depth, the bottom of the trench has to be cleared of all stones or pieces of rock and levelled up properly. A layer of soft soil/ or sand (in case the excavated material contains sharp pieces of rock/stones) of not less than 5 cms is required for levelling the trench to ensure that the cable when laid will follow a straight alignment. Adequate care shall be exercised while laying so that the OF cables are not put to undue tension/ pressure after being laid as this may adversely affect the optical characteristics of cables with passage of time.
- (ii) The FSP shall ensure that trenching and pipe laying activities are continuous, without leaving patches or portions incomplete in between. In case intermediate patches are left, measurement of the completed portions will be taken only after work in such left over patches are also completed in all respects.
- (iii) Preparatory to aligning the pipe for jointing, each length of the PLB pipe shall be thoroughly cleaned to remove all sand, dust or any other debris that may clog, disturb or damage the optical fibre cable when it is pulled at a later stage. The ends of each pipe and inside of each PLB socket shall be thoroughly cleaned of any dirt or other foreign materials.
- (iv) After the trench is cleaned the PLB pipes shall be uncoiled and shall be laid in the cleaned trench, jointed with HDPE sockets. At every manhole approximately at every 200m or at bends or turns the pp rope will be tied to the PLB ends caps used for sealing the PLB pipes, to avoid entry of rodents/ mud etc.
- (v) At the end of each day work, the open ends of the pipes sections shall be tightly closed with end caps to prevent the entry of dirt/mud, water or any foreign matter into PLB pipes until the work is resumed.
- (vi) The PLB pipes shall be laid with protection using Split RCC pipes. if depth is less than 1.2 meters, protection by using RCC/G.I. pipe/concreting shall be provided. Engineer-in-charge shall decide about such stretches and type of protection to be provided in view of the site requirements. Normally 100 mm RCC pipes shall be used for protecting PLB pipe but if more than one PLB pipe is to be laid and protected, RCC pipe of suitable size to accommodate the required number of PLB pipes shall be used.
- (vii) The PLB pipes shall be laid in RCC Full round spun pipes/GI pipes as required at road crossings. The RCC pipes/GI pipes shall extend at least 3 meters on either side of the

road at road crossings. At road crossings, extra GI/PLB pipes may be laid as per the direction of the Engineer-in-charge.

- (viii) Wherever RCC Full round pipes are used for protection, the gaps between the RCC collars and the RCC pipes shall be sealed using cement mortar 1:3 (1:53 grade cement of reputed brand, 3: fine sand without impurities) to bar entry of rodents. Every third collar of RCC pipes (normally of 2 meters length) and also both ends of RCC pipes will be embedded in a concrete block of size 40 cms (L) x 40 cms (W) x 25 cms (H) of 1:2:4 cement concrete mix (1: 53 grade cement of reputed brand, 2: coarse sand, 3: stone aggregate of nominal size of 20 mm) so that the alignment of RCC pipes remain firm and intact and to avoid entry of rodents.
- (ix) Wherever GI pipes are used, special care should be taken to ensure that G.I. pipes are coupled properly with the sockets so as to avoid damage to PLB pipe and eventually the OF cable in the event of pressure coming on the joint and G.I. pipe joint giving its way. Rubber bushes shall be used at either ends of the GI pipes to protect PLB pipe. Both the ends of G.I. pipe will be embedded in a concrete block of size 40 cms (L) x 40 cms (W) x 25 cms (H) of 1:2:4 cement concrete mix (1: 53 grade cement of reputed brand, 2: coarse sand, 3: stone aggregate of nominal size of 20 mm) so that alignment of G.I. pipes remain firm and intact and to avoid entry of rodents.

4.5. **Back Filling and dressing of the trench**

- (i) The Back filling Operation is to be completed on the same day along with the execution of Trenching work.
- (ii) The earth used for filling shall be free from all roots, grass, shrubs, vegetation, trees, saplings and rubbish. The excavated earth is to be used for back filling. It is to be ensured that the PLB pipes have been properly laid in the trench at the specified depth, the back filling operation shall follow as closely as practicable. The back filling operation shall be performed in such a manner so as to provide firm support under and above the pipes and to avoid bend or deformation of the PLB pipes when PLB pipes get loaded with the back filled each.
- (iii) At locations where the back filled materials contains stones/sharp objects which may cause injury to the PLB pipes and where the excavated or rock fragments are intended to refill the trench in whole or in part, the trench should be initially filled, with a layer of ordinary soil or de-rocked loose earth of not less than 10 cms above the pipes.
- (iv) Back filling shall be performed immediately after laying the PLB pipes. The back filled trench should be flooded with water to ensure settlement and consolidation of the soil. The cave-in portions are to be refilled properly after flooding. Back filling shall be thoroughly rammed, so as to ensure original condition and made safe for traffic. The dug up material further left out after ramming should be kept as heap above the trench while refilling.
- (v) On completion of back filling, where ever permitted the left out soil is to be piled on the trench in inverted cone manner to avoid future sinking of the trench. The FSP is responsible for refilling and levelling of trench at his own cost, if found sunk / Cave-in at Later date.

4.6. ROAD RESTORATION WORK

4.6.1. Road restoration work is required to be performed in Private roads and also in premises of Corporate Customers where OFC Trenching is carried out. **The Work is to be completed within 5 days of Pit closure by back filling.**

4.6.2. The restoration is to be carried out as per the specifications of the builders / association / local agencies. The quality of the work should be high and should not cause any hindrance to the traffic. The restoration work is to be carried out within the time allotted for execution. Necessary material / labour logistics are to be planned by the contractor for proper completion of work in stipulated time.

4.6.3. The restoration work consists of two components:

(i) Cement concreting:

- (a) The sand settled in the pit is to be engraved for about a depth of 300 mm from the surface. The bed is to be rammed for firm settlement.
- (b) The bed is to be filled with cement concrete of thickness 225 mm. The cement concrete should be done with 1:4:8 mixes (1 cement: 4 coarse sand: 8 graded stone) using 25mm down crushed stone to aggregate thickness of 225 mm. The concrete has to be rammed well for firm settlement. Proper water curing is to be carried out.
- (c) The sand to be covered for smooth vehicular movement.
- (d) Any sand spilled over is to be cleaned and the area is to be swiped to clear any debris.
- (e) Daily water curing of the pit is to be carried for a period of 3 days.

(ii) Black topping:

- (a) Four days from the concreting the black topping of the pit is to be carried out. Road restoration with bitumen macadam for semi grouting 50 mm thick and premix carpet surfacing of 25 mm thick over the grouted surface total up to 75 mm thick including supply of asphalt etc evenly to match the road surface including consolidation and rolling as per standard specification of DSR 1997.
- (b) After completion of Black topping. Any excess earth / sand available in the area is to be cleared and the area is to be cleanly swiped.
- (c) Storm water drain inlets available in the vicinity to be cleared.

4.6.4. Re-laying of interlock tiles/Bricks/CC slabs

- (i) Re-laying of interlocking Tiles / Bricks / CC slabs is required to be performed in Private Roads, In premises of Apartment complex / Corporate Customers premises where OFC Trenching is carried out. The requirement for the Re-laying shall be decided by the Engineer-in charge. The work applies to all types of Interlocking tiles, Cement concrete slabs, Cement concrete tiles and Brickworks.
- (ii) The FSP shall deploy suitable methods and Techniques for careful removal of Tiles / Bricks / CC slabs which are in the trenching path. The work to be carried out such that the Tiles / Bricks / CC slabs are removed with minimum damage.

- (iii) The recovered Tiles / Bricks / CC slabs are to be stacked near to the work spot carefully such that it won't be hindrance to the traffic / occupants of the building concerned.
- (iv) On completion of trenching and pipe laying work the soil is to be rammed thoroughly to form a leveled surface. The recovered tiles are to be laid back in suitable form so that the restored surface matches with the remaining area in all respects like level, colour/ design etc.,
- (v) The FSP shall replace any damaged Tiles / Bricks / CC slabs in above mentioned operations and make good the surface at his own cost.

4.6.5. The FSP is responsible for refilling and re-doing the work at his own cost, if the surface found sunk / Cave-in at Later date.

4.7. CABLE PULLING

Cable pulling through PLB pipe laid in open trenching:

- (i) Manholes marked during PLB pipe laying of approx. size of 3 m length x 1.0 m width x 1.65 m. Depth shall be excavated for pulling the cables. There may be situations where additional manholes are required to be excavated, for some reasons, to facilitate smooth pulling of cable.
- (ii) The existing 6 mm pp rope shall be replaced with PP rope of 8mm dia between the two consecutive manholes. This is to ensure that the PLB pipes are cleaned for pulling the cable without exerting undue tension on the OF cable. While cleaning, excessive pressure should not be put, which may result in breaking of P.P. rope and thus require opening of additional manholes. However, in case the cleaning rope gets stuck up during pulling, the location of clogging of PLB Pipe should be measured and located accurately. The trench at that location should be opened and the PLB Pipe should be cleaned properly or if not possible it should be changed by a clean new PLB Pipe to facilitate easy cable pulling at a later stage without any breakage. If clogging of PLB pipe is in the location where the pipes are protected either by RCC pipe or by concreting and the protection is broken for cleaning/changing the PLB pipe, the protection thus removed should be brought back to normal by the contractor without any extra cost. However, PLB pipes, RCC pipes required for this purpose will be supplied by BSNL.
- (iii) The Optical Fiber cable is delicate and is susceptible to damages due to mis-handling. Enough precautions must be taken while handling, Uncoiling and pulling. The cable is to be uncoiled first with help of Jack and Wheel arrangement and Cable is to be put in **"Formation of 8"** to avoid any Twist. The cables shall be manually pulled through already laid PLB, pipes by using the 8 mm pp rope. For avoiding cable damage **"Formation of 8"** is to be carried out at each of the Pulling Manhole and Effective communication is to be established between the Labours at each of the Pulling Manholes. The work is to be carried out under the strict supervision of site in-charge.
- (iv) After pulling of the drum is completed, both ends of the PLB pipes in each manhole should be sealed by hard rodent resistant rubber bush, to avoid entry of rodents/mud into PLB pipes.

- (v) The Manholes are prepared by providing 65 mm split HDPE pipe of 2.5 to 3m length and closing the split PLB pipes by providing necessary clamps/adhesive tape as per the directions of Engineer-in-charge. Afterwards, the split/cut HDPE pipe are covered with 100mm split RCC pipe of 2m length and sealing the ends of RCC pipe with lean cement solution for protecting bare cable in the manhole. After fixing of HDPE/RCC split pipes necessary back filling / reinstatement and dressing of manholes should be carried out as referred under trenching. The location of the pulling manhole should be recorded for preparation of documentation.
- (vi) The OFC joint is to be housed in Joint chamber / RCC chamber. For fixing pre cast RCC chamber, first a pit of size 2 m x 2 m x 1.8 m depth is required to be dug. Pre cast RCC chamber consists of three parts (i) round base plate of 100 cm dia and 10 cm thickness (ii) full round RCC joint chamber with dia of 900 cm and height of 50 cm and thickness of 8 cm (iii) round top cover will be in two halves with dia of 100 cm and thickness of 10 cm having one handle for each half in centre and word `OFC' engraved on it. Pre cast RCC chamber (which is coming in part should be placed in the pit and parts should be fixed by applying cement mortar. After, fixing the pre cast RCC joint chamber, the joint chamber is filled with clean sand before closing. Lastly, back filling of joint chamber pit with excavated soil should be carried out up to normal ground level and compacted.

5. Material Supply, Tools and Testers

5.1. Following matrix gives the details of standard supply of Materials. Any other materials required to complete the installation is the responsibility of FSP.

S.No	Description of the Equipment / Material	BSNL Scope	FSP Scope	Remarks
<u>1</u>	OLT, SMPS Power Module with Battery Bank	Supply and Install		
<u>2</u>	24F / 96F OF cable, PLB pipes, WSJ OF joint boxes with in 500 mts. Of customer premises		Provide, Lay, terminate and maintain	To be used for Lead-in, feeder cable/ .
<u>3</u>	Drop fiber and Crimp connectors,		Supply from own resources, Install and maintain	
<u>4</u>	ONTs , Splitters	Supply to FSP in Batches	Install and maintain	
4	PVC pipes of various sizes (1/2 inch, 1 inch, 1.5 inch) with couplers, joints, clamps, bushes etc.,	-----	Supply from own resources, Install and maintain	All PVC pipes used should be Hard Pipe of 15 gauge thickness.
5	Supporting structures like runways, Joint chambers, Enclosures, construction materials, Pillar / Mini Pillars	_____	Supply from own resources, Install and maintain	
6	End Connectors, Crimps,		Supply from	

	Termination boxes, Patch cords, Sockets etc.,	_____	own resources, Install and maintain	
7	Any other material / Provision required	-----	Supply from own resources, Install and maintain	

- (i) The FSP shall conduct detailed survey of the project, consult with the Builder / Association for permissible cable paths. Accordingly he would estimate the material requirement.
- (ii) FSP shall submit the detailed requirement for items to be supplied by BSNL to designated BSNL official. BSNL official shall be responsible to make the material available within maximum of 1 day after ascertaining the justification.
- (iii) FSP shall take delivery of all the materials at site and ensure safe custody of the same during the period of installation, commissioning and rollout.
- (iv) As the FTTH equipment deployed has to serve for a long period, The PVC pipes used should be of good quality, The Pipes laid should withstand atmospheric effects, accidental hits due to other agency works, wear and tear.

5.2. Tools and Testers

The FTTH GPON deployment and its further maintenance need specific tools, testers and other sophisticated instrumentation. Following is the responsibility matrix for BSNL and FSP.

S.No	Description of the Item	BSNL Scope	FSP Scope	Remarks
1	Tools like Drilling Machine, Electrical tool kit, Cable crimping machine tc.,	-----	Need to Own / Have to make their own arrangements	
2	Splicing Machine, Cutting tool for executing OFC joints	-----	Need to Own / Have to make their own arrangements	
3	Drop fiber Crimping Tool kit		Need to Own / Have to make their own arrangements	FSP to ensure enough kits are available for immediate provision of line / fault rectification
4	Optical Power Meter, Bare fiber adapter, Light source	-----	Need to Own / Have to make their own arrangements	Pre-testing of all the cables / fibers need to be done before carrying out terminations.
5	OTDR	-----	Need to Own / Have to make	Required during the testing of cables, for

			their own arrangements	offer to A/T, also for future fault diagnosis
6	Laptop	-----	Need to Own / Have to make their own arrangements	FSP need to provide Laptops to their site engineers to be used for line testing / commissioning

6. **Inspection, Quality Control.**

6.1. **The Quality of Works**

- (i) The quality and availability of media and efficiency of the reliable media connectivity to Customers depends up on quality of laying of Optical Fibre Cable. Further, the OF cable are vulnerable to damages due to work of other agencies.
- (ii) The quality of O.F. cable plant depends upon the quality of individual items of work involved viz. Depth of Cables laid, care while pipe & laying, protection, joining to Cables and Terminations in equipment room and at last but not the least on documentation of Cable network. In order to ensure quality in Cable Construction work, each component of work needs attention. The works shall be carried out strictly in accordance with specifications laid down to achieve the requisite quality aim.
- (iii) It is imperative that the FSP deploy manpower that is fully conversant with the construction practices and shall be fully equipped to carry out the work in accordance with the specifications. The FSP are expected and bound to ensure quality in construction works in accordance with specifications laid down. The FSP shall engage adequate and experienced supervisors to ensure that works are carried out as per specifications and with due diligence and in a professional manner. The FSP shall satisfy themselves that the work conforms to the quality specifications.
- (iv) In addition to supervision by construction officer of FSP, all works at all times shall be open to inspection of the BSNL Authorities. The FSP shall be bound, if called upon to do so, to offer the works for inspection without any extra payment.

6.2. **Inspection & Testing**

- (i) The FTTH equipment and GPON along with the OFC laid are liable for inspection by BSNL Officers. If during such Inspection if deviations from standard construction practice are found, FSP shall make good all deviations.

7. **Documentation**

The documentation, consisting of the following shall be prepared for the FTTH GPON deployment done within a Project.

- 7.1. Route Index Diagrams - General:** This diagram shall consist of Cable Route Details on Geographical Map drawn to scale with prominent land marks and alignment of cable with reference to road. This diagram clearly depicts the **GPON architecture** used within the project. This shall be prepared on A-3 sheets of 80 GSM

7.2. **Route Index Diagram - Profile:** These diagrams will contain Make and size of the feeder OF cable This contains:

- (i) **Two Point Offset** of cable i.e., One from centre of the road and one from the nearest wall / fixed structure, each taken at every 10 meters;
- (ii) Depth profile of Cable at every 10 meter for the length where it is laid underground.
- (iii) Details of protection with type of protection depicted on it;
- (iv) Location of joints and pulling manholes with **Three Point Offset** i.e., from nearest permanent structures taken in different directions.
- (v) These diagrams shall be prepared A-4 sheets of 80 GSM. On one sheet profile of maximum 200 meters shall be given to ensure clarity.

7.3. **Joint Location Diagram :** This diagram will show:

- (i) Geographical location of all the joints.
- (ii) Location of joints manholes with **Three Point Offset** i.e., from nearest permanent structures taken in different directions.
- (iii) Depth of joint chamber covers from ground level.
- (iv) Type of chamber (Brick/Pre-cast)
- (v) Length of O.F. cable kept inside the joint chamber from either direction.

7.4. **GPON Index Diagram - Profile:**

- (i) These diagrams would contain the detailed layout of GPON network within the project premises. The scalar diagram would indicate the Splitter location and their connectivity to the common point within the project.
- (ii) The GPON detailed diagram would show the connectivity carried out from Splitter to further Second-level splitter / Customer premises. It comprises of
 - a. **Two Point Offset** of cable i.e., One from centre of the road / wall corner and one from the nearest wall / fixed structure, each taken at every 10 meters;
 - b. Depth profile of Cable at every 10 meter for the length where it is laid underground.
 - c. Details of protection with type of protection depicted on it;
 - d. Location of branching joints and pulling manholes with Three Point Offset i.e., from nearest permanent structures taken in different directions.
 - e. The Termination details at splitter end.

7.5. **GPON Connection Details**

- (i) FSP shall make the full termination details of GPON network within the project. The details are to be made diagrammatically such that any customer can be traced back to OLT port via Level-2 Splitter Port and Level-1 Splitter Port.
- (ii) The customer wise termination details may be kept as a spread sheet for easy identification and further appending to a centralized data base.

7.6. These diagrams shall be prepared A-4 sheets of 80 GSM. On one sheet profile of maximum 200 meters shall be given to ensure clarity.

7.7. All the above mentioned documentation shall bear the signatures of the FSP, the BSNL Engineer-in-charge as a proof of accuracy of the details. The diagrams shall be

bound in A-4 size book with cover. The cover sheet shall be of 110 GSM and laminated. The front cover shall have the following details.

- (i) Name of the Project
- (ii) Name of the OLT Link
- (iii) Name of the FSP
- (iv) Date of completion of work

7.8. Four sets of the above documentation need to be prepared for submission to BSNL. In addition FSP needs to maintain a copy at the site for day to day fault rectification.

Provisioning & Maintenance Philosophy

1. Introduction:

- 1.1. The FTTH services are targeted for premium class high ARPU customers who seek good quality of services and superior uptimes. These customers are at the fore-front in adopting new technologies; hence their appetite for better bandwidths is higher. Today professionals are connected on internet, and they perform significant of their activities / work on the internet.
- 1.2. The customers of such class demand always-on service and good customer facilitation from the Service provider. To offer such services, BSNL is using the EOI to select FSPs for operation and maintenance of FTTH service on revenue share basis.

2. Marketing of Services

- 2.1. The FSP shall carry out door to door campaigning with the customers for subscription for FTTH services. Customer need to be explained about the benefits of the FTTH based voice and broadband service. The customer segment targeted for FTTH services are active customers hence their time is precious. FSP need to meet the customer at his / her convenient time for booking of the services.
- 2.2. Awareness generation is an important element of marketing the service. FSP need to explain the customer about benefits of FTTH and various applications that can work on it. Customer need to be apprised of new services that would help his day to day work, offer education and entertainment.
- 2.3. FSP needs to help customer in making informed decision on plan selection. The benefits of Higher speed plans vis-à-vis customer needs to be analyzed and explained so that customer appreciates the value they derives. With proper canvassing and counseling FSP can aim for up selling the services. It may be ensured that customer is made aware of all the tariff plans BSNL offers, educate the customers on superior features & advantages of BSNL's plan vis-à-vis competitors plans and also accept booking of any plan he prefers.
- 2.4. FSP can explore innovative ideas like conducting camps on weekend, demonstration of high end services etc., to the occupants of the project and give them live, visual experience of the services and end applications.

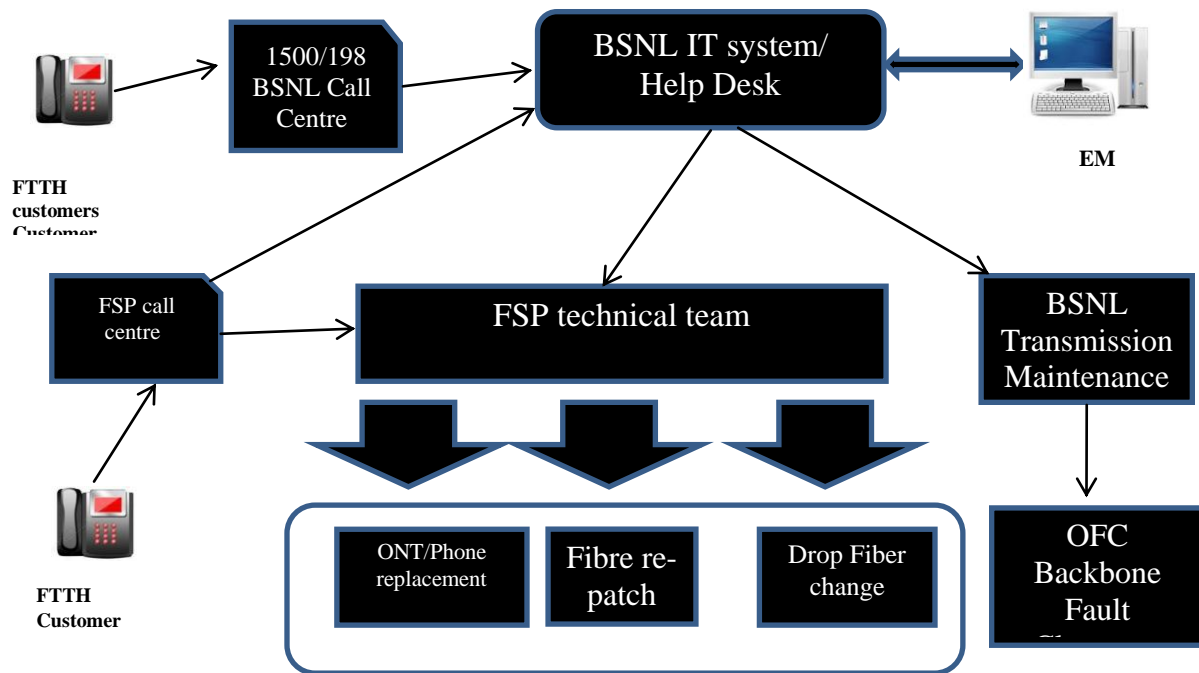
3. Order Fulfillment

- 3.1. The occupancy in green field apartments would be incremental and would take couple of months to reach significant numbers. The FSP needs to ensure that right from the beginning of the first occupation, the customer booking is done and FTTH services are offered to the customers. For this purpose the FSP need to maintain cordial relation with the Builder / Maintenance agency / Association so that the prospective occupants list is known a week ahead of actual occupation.
- 3.2. FSP need to terminate the drop fiber at customer premises in the location of his choice and install the ONT along with Power pack. The ONT preferably to be fixed firmly on the wall so that it is not disturbed on day to day basis.

- 3.3. For handling the order provisioning, complaint attending and for testing it is necessary that FSP personnel deployed at the site needs to have Laptop with Data-card facility, the personnel also to be provided with mobile phone for contact. FSP needs to login to BSNL Order booking system via internet and feed the ONT serial number, customer details in BSNL Order booking system.
- 3.4. The telephone number allotment, broadband creation etc., would be shown in the Order booking system which FSP needs to monitor and update accordingly.
- 3.5. In the event customer has opted for any value added service like IPTV, Games on Demand etc., FSP may also inform and co-ordinate with BSNL/concerned content providers for service provision.

4. Fault Reporting Mechanism:

- 4.1. The FTTH lines need to maintained very high uptime. FSP need to resolve any problem / complaint related within the project within short time so that customer delight is maintained.
- 4.2. As shown in the diagram the FRS system functionality is explained.
- 4.3. FTTH customer can call the complaint number 1500/198 or any other number which BSNL allots for FTTH service. The calls received are booked in the BSNL IT system. Further testing of these faults is carried out at Help desk to segregate the fault.



Fault Reporting System

- 4.4. BSNL Help desk would carry out testing using the EMS to segregate the fault. If fault is found in the backbone network concerned BSNL transmission maintenance team would be informed. In case fault is found to be within the

Apartment/Campus/Complex/customer premises, or customer complaint is specific to service / performance issue, the fault would be assigned to the FSP with time stamp of making over of fault to FSP. FSP shall/may also maintain a suitable call centre wherein customers may also report the complaint. Call center of FSP also shall input the complaint into BSNL FRS IT system and attend the fault pro-actively, if the same is in FSP lead-in cable/customer premises or due to reasons within the control of FSP. All complaints received by FSP directly needs to be logged in BSNL FRS system necessarily.

- 4.5. All the complaints received either directly or made-over through BSNL system need to be cleared within the stipulated time period as given in the document. Any delays in clearance would invite penalties.
- 4.6. FSP will keep a record of number of faults and rectification reports in respect of the service, which will be produced before BSNL as and when and in whatever form desired.
- 4.7. The number of personnel required to operate & maintain the FTTH services as per SLA is to be decided by the FSP, however, it is suggested that FSP may deploy his personnel and man the complexes where number of apartments / residences are about 500 or more.
- 4.8. FSP need to equip his personnel with required tools, testers etc., so that they would carry out the work within stipulated timelines in professional manner.
- 4.9. FSP need to maintain buffer stock of spares like ONT, Power Pack, Telephone Instruments, Drop fiber etc., with him so that fault are cleared faster. For BSNL supplied items, the permissible spare quantity would be decided by BSNL in consultation with FSP from time to time.
- 4.10. The faulty items along with fault description need to be exchanged with BSNL official on monthly basis

5. Work-day and Working hours

- 5.1. Work Day: All seven days of a week (including Sunday) would be considered as work day, All days of the year including National Holidays would be considered as work day.
- 5.2. Work Hours: The normal work hours would be considered as 8 AM to 10 PM.

Format for NON-DISCLOSURE AGREEMENT

This agreement is made as of the _____ 2010 between BHARAT SANCHAR NIGAM LIMITED (BSNL) a Government of India Enterprise, having its registered office at 5th Floor Sanchar Bhawan, 20, Ashoka Road, New Delhi & Corporate office at Bharat Sanchar Bhawan, Janpath Road, New Delhi hereinafter called BSNL which expression shall unless repugnant to the subject or the context mean & included its successors, _____ nominees or assigns & M/s.

_____ a company listed in the Stock exchange /, & having its registered office at _____ herein after called " _____ " which expression shall unless repugnant to the subject or the context mean & include its successors, nominees or assigns.

Where as in order to pursue the mutual business purpose of this particulars project as specified in Exhibit A (the "Business Purpose") BSNL &M/s. _____ recognize that there is a need to disclose to one another certain information, as defined in para 1 below, of each party to be used only for the Business Purpose & to protect such confidential information from unauthorized use & disclosure.

In consideration of the other party's disclosure of such information, each party agrees as follows:

1. This Agreement will apply to all confidential & proprietary information disclosed by one party to the other party, including information listed in Exhibit A attached hereto & other information which the disclosing party identifies in writing or otherwise as confidential before or within thirty days after disclosure to the receiving party ("Confidential Information"). Information consists of certain specifications, designs, plans, drawings, software, prototypes and/or technical information, & all copies & derivatives containing such information, that may be disclosed to one, another for & during the purpose, which a party considers proprietary or confidential ("Information"). Information may be in any form or medium, tangible or intangible, & may be communicated/disclosed in writing orally, or through visual observation or by any other means to one party (hereinafter referred to as the receiving party) by the other party (hereinafter referred to as one disclosing party). Information shall be subject to this agreement, if it is in tangible form, only if clearly marked as proprietary or confidential as the case may be, when disclosed to the receiving party or, if not in tangible form, its proprietary nature must first be announced, & it must be reduced to writing & furnished to the receiving party within thirty (30) days of the initial disclosure.
2. M/s. _____ & BSNL hereby agreed at during the Confidentiality Period:
 - (i) The receiving party shall use information only for the purpose, shall hold information in confidence using the same degree of care as it normally exercises to protect its own proprietary information, but not less than reasonable care, taking into account the nature of the information, & shall

- grant access to information only to its employees who have a need to know, but only to the extent necessary to carry out the business purpose of this project as defined in **exhibit 'A'** shall cause its employees to comply with the provisions of this Agreement applicable to the receiving party, shall reproduce information only to the extent essential to fulfilling the purpose, & shall prevent disclosure of information to third parties. The receiving party may, however, disclose the information to its consultants & contractors who need to know, provided that doing so, the receiving party agrees to bind those consultants/contractors to terms at least as restrictive as those stated herein, advise them of their obligations, & indemnify the disclosing party for any breach of those obligations.
- ii) Upon the disclosing party's request, the receiving party shall either return to the disclosing party all information or shall certify to the disclosing party all information or shall certify to the disclosing party that all media containing information have been destroyed. Provided, however, that an archival copy of the information may be retained in the files of the receiving party's counsel, solely for the purpose of proving the contents of the information.
3. The foregoing restrictions on each party's use or disclosure of information shall not apply to information that the receiving party can demonstrate;
- a) Was independently developed by or for the receiving party without reference to the information, or was received without restriction; or
- b) Has become generally available to the public without breach of confidentiality obligations of the receiving party; or
- c) Was in the receiving party's possession without restriction or was known by the receiving party without restriction at the time of disclosure; or
- d) Is the subject of a subpoena or other legal or administrative demand for disclosure; provided, however, that the receiving party has given the disclosing party prompt notice of such demand for disclosure & the receiving party reasonably cooperates with the disclosing party's efforts to secure an appropriate protective order; or
- Is disclosed with the prior consent of the disclosing party; or
- Was in its possession or known to it by being in its use or being recorded in its files or computers or other recording media prior to receipt from the disclosing party & was not previously acquired by the receiving party from the disclosing party under an obligation of confidence; or
- The receiving party obtains or has available from a source other than the disclosing party without breach by the receiving party or such source of any obligation of confidentiality or non-use towards the disclosing party.
4. Each party agrees not to remove any of the other party's confidential Information from the premises of the disclosing party without the disclosing party's prior written approval. Each party agrees to exercise extreme care in protecting the confidentiality of any confidential information which is removed, only with the disclosing party's prior written approval, from the disclosing party's premises. Each party agrees to comply with any & all terms & conditions the disclosing party may impose any such approved removal, such as conditions that the removed confidential information & all copies must be returned by a certain date, & that no copies are to be made off of the premises.

5. Upon the disclosing party's request, the receiving party will promptly return to the disclosing party all tangible items containing or consisting of the disclosing party's confidential information all copies thereof.
6. Each Party recognizes & agrees that all of the disclosing party's Confidential information is owned solely by the disclosing party (or its licensors) & that the unauthorized disclosure or use of such confidential information would cause irreparable harm & significant injury, the degree of which may be difficult to ascertain. Accordingly, each party agrees that the disclosing party will have the right to obtain an immediate injunction enjoining any breach of this Agreement, as well as the right to pursue any & all other rights & remedies available at law or in equity for such a breach.
7. Access to information hereunder shall not preclude an individual who has seen such information for the purposes of this agreement from working on future projects for the receiving party which relate to similar subject matters, provided that such individual does not make reference to the information & does not copy the substance of the information during the confidentiality period. Furthermore, nothing contained herein shall be construed as imposing any restriction on the receiving party's disclosure or use of any general learning, skills or know-how developed by the receiving party's personnel under this agreement, if such disclosure & use would be regarded by a person of ordinary skill in the relevant area as not constituting a disclosure or use of the information.
8. As between the parties, all information shall remain the property of the disclosing party. By disclosing information or executing this agreement, the disclosing party does not grant any license, explicitly or implicitly, under any trademark, patent, copyright, mask work protection right, trade secret or any other intellectual property right. **THE DISCLOSING PARTY DISCLAIMS ALL WARRANTIES REGARDING THE INFORMATION, INCLUDING ALL WARRANTIES WITH RESPECT TO INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS & ALL WARRANTIES AS TO THE ACCURACY OR UTILITY OF SUCH INFORMATION.** Execution of this agreement & the disclosure of information pursuant to this agreement does not constitute or imply any commitment, promise, or inducement by either party to make any purchase or sale, or to enter into any additional agreement of any kind.
9. Either party's failure to enforce any provision, right or remedy under this agreement shall not constitute a waiver of such provision, right or remedy.
10. This agreement will be construed in, interpreted & applied in accordance with the laws of India.
11. That in case of any dispute or differences, breach & violation relating to the terms of the agreement. The said matter or dispute, difference shall be referred to sole arbitration of CMD, BSNL or any other person appointed by him. That the award of the arbitrator shall be final & binding on both the parties. In the event of such Arbitrator to whom the matter is originally referred to is being transferred or vacates his office on resignation or other wise or refuse to do work or neglecting his work or being unable to act as Arbitrator for any reasons whatsoever, the CMD, BSNL shall appoint another person to act as Arbitrator in place of outgoing Arbitrator & the person so appointed shall be entitled to proceed further with the reference from the stage at which it was left by his predecessor. The M/s. _____ will have NO OBJECTION in any such appointment, that arbitrator so appointed is employee of BSNL. The said Arbitrator shall act under the provisions of the

Arbitration & conciliation Act, 1996 or any statutory modifications or re-enactment there of or any rules made thereof.

12. This agreement & Exhibit A attached hereto constitutes the entire agreement of the parties with respect to the parties' respective obligations in connection with information disclosed hereunder & supersedes all prior oral & written agreements & discussions with respect thereto. The parties can amend or modify this agreement only by a writing duly executed by their respective authorized representatives. Neither party shall assign this agreement without first securing the other party's written consent.
13. This agreement will remain in effect for five year from the date of the last disclosure of confidential information, at which time it will terminate, unless extended by the disclosing party in writing.

IN WITNESS WHEREOF, the parties hereto have executed this agreement by their duly authorized officers or representatives.

M/s. _____
Signature: _____
Printed Name : _____
Title : _____

BHARAT SANCHAR NIGAM LIMITED
Signature: _____
Printed Name : _____
Title : _____

1 Exhibit A

1. Business Purpose : Execution of Customer end Activities for deploying FTTH Network in BSNL

2. Confidential Information of M/s - _____

3. Confidential Information of Bharat Sanchar Nigam Limited(BSNL):

➤ All information shared in oral or in written form by BSNL with M/s _

➤ Number of subscriptions, consumption pattern etc

M/s _____

Signed

DEED OF INDEMNITY

(On non-judicial stamp paper of appropriate value)

This **DEED OF INDEMNITY** is executed on this date _____ '13 , by

1. **<<Name of the Bidder>>**, a company registered under the Companies Act, 1956 and having its registered office at <<Address of the Bidder>> acting through << Authorized Signatory>> is hereinafter, for the purposes of this Deed of Indemnity, be collectively referred to as '**FTTH services partner**' or '**FSP**' is authorized representative, authorized to execute this Deed of Indemnity on behalf of the **FTTH services partner**' or '**FSP**'.

TO AND IN FAVOUR OF

Bharat Sanchar Nigam Limited, through the General Manager MM BSNL Corporate Office (hereinafter referred to as the Purchaser which expression shall unless repugnant to the context or meaning thereof mean and be deemed to include its authorized representatives and permitted assigns) **On the Other Part.**

WHEREAS

- (a) The Purchaser had invited bids *vide* their EOI No DATED (hereinafter referred to as 'EOI') for the purpose of Providing FS Market place Service through FSP on revenue share basis.
- (b) The FSP (Bidder) had submitted its proposal dated ____ (hereinafter referred to as the 'Bid') for the provision of such services in accordance with its proposal as set out in its Bid and in accordance with the terms and conditions of the EOI.
- (c) The EOI Document requires the FSP (Bidder) to indemnify the Purchaser against all third party claims of infringement of patent, trademark or industrial design rights arising from use of goods or any part thereof in the mentioned work.
- (d) The Bidder has in order to comply with the terms of the EOI agreed to execute the Deed of Indemnity on such terms and conditions more fully mentioned below.

NOW THIS DEED OF INDEMNITY WITNESSETH AS FOLLOWS:

1. The FSP (Bidder) shall, in consideration of the Purchaser making payment under and in accordance with the EOI Document, hereby agrees to indemnify the Purchaser against any costs, loss, damages, and claims from third parties or liabilities suffered by the Purchaser and directly arising out of the following reasons:
 - a. Any illegal or unauthorized use (piracy) or in connection with any claim or proceedings relating to any breach or violation of any permission/license terms or infringement of any Intellectual Property Rights by the FSP (Bidder) or any sub-contractor during the course of performance of the Services.

- b. Any litigation arising out with the original software solution provider in case of bundled software for which separate licenses would otherwise have been required.
 - c. The FSP (Bidder) shall protect, defend, indemnify and hold harmless to BSNL and its employees, officers, Directors, agents or representatives from and against any and all liabilities, damages, fines, penalties and cost (including legal costs and disbursements) arising from:
 - I. Any breach of any statute, regulation, direction, orders or standards from any governmental body, agency or regulator issued with respect to the product/services being supplied/provided under this EOI.
 - II. Any claim made by third parties arising out of the use of the services of BSNL being provided using the equipment supplied under the EOI to the extent these are attributable solely to the poor quality or non-compliance of the products/services to the respective specifications.
 - III. Any claims arising from the customers or other service providers in connection with interruptions or degradation of Services due to non-availability of services beyond the stipulated time frame as contained in AMC and solely attributable to the bidder of the product and services under this EOI.
 - IV. Any claim that the equipment/ services or any value addition component offered and supplied by the bidder in this EOI, infringe any patent, trademarks or copyrights of any third party.
- 2. This Deed of Indemnity shall stand terminated on expiry of or early termination of the contract period as envisaged in the above said EOI requirement.
 - 3. The Deed of Indemnity shall constitute the entire indemnity provided by the FSP (Bidder) for the indemnities asked in this EOI.
 - 4. This Deed of Indemnity shall be governed by and construed in accordance with Indian law.

(Authorized Signatory)
Date:
Place:
<< Name of the Bidder >>

Witness 1:

Witness 2: