

DRAFT TENDER DOCUMENT

FOR

RURAL WIRELESS BROADBAND SCHEME FOR

SETTING UP & MANAGEMENT OF WIRELESS BROADBAND NETWORK AND

PROVISION OF WIRELESS BROADBAND SERVICES

IN

SPECIFIED RURAL AND REMOTE AREAS

UNDER

INDIAN TELEGRAPH RULES

AMENDED VIDE INDIAN TELEGRAPH (AMENDMENT)

RULES, 2006 & 2008

STREAM-IV

F. No. 30-160-2/Wireless_BB/2006-USF

GOVERNMENT OF INDIA

MINISTRY OF COMMUNICATIONS & IT

DEPARTMENT OF TELECOMMUNICATIONS

OFFICE OF ADMINISTRATOR, USO FUND

USF CELL,

ROOM NO.503, SANCHAR BHAWAN,

20 ASHOKA ROAD, NEW DELHI-110 001, INDIA

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(TO BE MODIFIED)

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**F. No. 30-160-2/Wireless_BB/2006-USF
MINISTRY OF COMMUNICATIONS & IT
DEPARTMENT OF TELECOMMUNICATIONS
UNIVERSAL SERVICE OBLIGATION FUND (BB UNIT)
SANCHAR BHAWAN, 20 ASHOKA ROAD,
NEW DELHI -110 001, INDIA**

NOTICE INVITING TENDER

TENDER NO. AND DATE : **30-160-2/Wireless_BB/2006-USF Dt.: ---04-2011**

DATE OF START OF SALE : **--.04.2011**
OF TENDER DOCUMENT

DUE DATE OF RECEIPT : **--.04.2011 TIME UPTO 15.30 HOURS**

DATE OF OPENING : **--.04.2011 TIME AT 16.00 HOURS**

VENUE OF TENDER OPENING : **COMMITTEE ROOM, 2ND FLOOR,
SANCHAR BHAVAN,
20,ASHOKA ROAD, NEW DELHI-110001.**

I) USO Fund has undertaken a scheme to provide subsidy support for setting up and management of wireless broadband network and provision of wireless broadband services to the specified rural and remote areas of the country by leveraging the existing telecom infrastructure, as detailed in **Table I** . Facilitation by USOF shall be in form of subsidy support as a percentage of Capital Recovery on the terms & conditions as specified in the tender document.

II) Notice Inviting Tender

On behalf of the President of India, sealed tenders are hereby invited from the licensed Cellular Mobile Service Providers (CMSPs), Unified Access Services Licensees (UASLs), Internet Service Providers (ISPs) of category A or B having licence based on the ISP guidelines dated 24.08.2007; **for setting up and management of wireless broadband network** and provision of terrestrial wireless broadband services to the specified rural and remote areas of the bidding units, which shall be the DoT Licensed Service Areas , as detailed in Table I. Bids can be submitted for one or more bidding unit(s) by purchasing only one Tender Document but the bidding unit-wise Earnest Money Bank Guarantee (EMBG), applicable against the respective bidding unit(s) for which bids are submitted, shall be furnished.

The subsidy support from the USO Fund shall be provided to the successful Bidder(s) at the representative rate arrived at through a single stage Bidding process. The subsidy support shall be provided in a phased manner over the validity period of the Agreement which shall be signed with the successful bidder.

TABLE I: BIDDING UNITS, BIDDERS'S NETWORTH AND EMBG FOR THE PURPOSE OF THIS SCHEME

Sl. No.	Name of the Bidding Unit	Areas covered	BIDDER'S NETWORTH (Rs.) [Under construction]	EMBG (Rs.) [Under construction]
01.	West Bengal Service Area	Entire area falling within the Union Territory of Andaman & Nicobar Islands and area falling within the State of West Bengal and the State of Sikkim, excluding the areas covered by the Union Territory of Andaman & Nicobar Islands and the area falling within Kolkata Metro Service Area (pl. see Note 4).		
02.	Andhra Pradesh Service Area	Entire area falling within the State of Andhra Pradesh.		
03.	Assam Service Area	Entire area falling within the State of Assam.		
04.	Bihar Service Area	Entire area falling within the re-organised State of Bihar and newly created State of Jharkhand pursuant to the Bihar Reorganisation Act, 2000 (No.30 of 2000) dated 25 th August, 2000.		
05.	Gujarat Service Area	Entire area falling within the State of Gujarat and Union Territory of Daman and Diu, Silvassa (Dadra & Nagar Haveli).		
06.	Haryana Service Area	Entire area falling within the State of Haryana except Panchkula town and the local areas served by Faridabad and Gurgaon Telephone exchanges.		
07.	Himachal Pradesh Service Area	Entire area falling within the State of Himachal Pradesh		

08.	Jammu & Kashmir Service Area	Entire area falling within the State of Jammu & Kashmir including the autonomous council of Ladakh, excluding LehLaddakh and Kargil districts(pl. see Note 4).		
09.	Karnataka Service Area	Entire area falling within the State of Karnataka		
10.	Kerala Service Area	Entire area falling within the State of Kerala, excluding the Union Territory of Lakshadweep and Minicoy (pl. see Note 4).		
11.	Madhya Pradesh Service Area	Entire area falling within the re-organised State of Madhya Pradesh as well as the newly created State of Chhattisgarh pursuant to the Madhya Pradesh Reorganisation Act, 2000 (No:28 of 2000) dated 25 th August, 2000.		
12.	Maharashtra Service Area	Entire area falling within the State of Maharashtra and Union Territory of Goa, excluding areas covered by Mumbai Metro Service Area.		
13.	North East Service Area	Entire area falling within the States of Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.		
14.	Orissa Service Area	Entire area falling within the State of Orissa.		
15.	Punjab Service Area	Entire area falling within the State of Punjab and Union territory of Chandigarh and Panchkula town of Haryana.		
16.	Rajasthan Service Area	Entire area falling within the State of Rajasthan.		
17.	Tamilnadu Service Area (excluding Chennai Service Area)	Entire area falling within the State of Tamilnadu and Union Territory of Pondichery excluding Local Areas served by Chennai Telephones,		

		Maraimalai Nagar Export Promotion Zone (MPEZ), Minzur and Mahabalipuram Exchanges		
18.	Uttar Pradesh (West) Service Area	Entire area covered by Western Uttar Pradesh with the following as its boundary districts towards Eastern Uttar Pradesh : Pilibhit, Bareilly, Badaun, Etah, Mainpuri and Etawah. It will exclude the local telephone area of Ghaziabad and Noida. However, it will also include the newly created State of Uttaranchal pursuant to the Uttar Pradesh Re-organisation Act, 2000 (No.29 of 2000) dated 25 th August, 2000.		
19.	Uttar Pradesh (East) Service Area	Entire area covered by Eastern Uttar Pradesh with the following as its boundary districts towards Western Uttar Pradesh : Shahjahanpur, Farrukhabad, Kanpur and Jalaun.		

NOTE:

1. Yenum, an area of Union Territory of Pondicherry is served under Andhra Pradesh Telecom Circle in East Godavari LDCA.
2. The definition of Local areas of exchanges will be as applicable to the existing cellular operators, i.e. at the time of grant of cellular Licences in Metro cities.
3. The definition of local areas with regard to the above service area as applicable to this Licence is as per definition applicable to Cellular Mobile Service Licences as in the year 1994 & 1995, when those Licences were granted to them. This is in accordance with respective Gazette Notification for such local areas wherever issued and as per the statutory definition under Rule 2 (w) Indian Telephones Rules, 1951, as it stood during the year 1994/1995 where no specific Gazette Notification has been issued.
4. Considering the special geographical and strategic conditions of a) Union Territory of Andaman & Nicobar Islands b) LehLaddakh and Kargil districts c) Union Territory of Lakshadweep and Minicoy, a separate scheme will be shortly launched for these areas.

III) Eligible Bidders

- i) Cellular Mobile Service Providers (CMSPs), Unified Access Services Licensees (UASLs), Internet Service Providers (ISPs) of category A or B having their license based on the ISP guidelines dated 24.08.2007, for a bidding unit, shall be eligible to participate in the bid for the respective bidding unit. The bidder shall have a valid service license, as indicated

above, for the subject bidding unit, and also adequate spectrum, directly provided to it, through WPC frequency assignment/wireless operating license and can also operate in the unlicensed frequency bands after following the WPC's due procedure, as applicable, in the subject bidding unit for provisioning of the said wireless broadband services, as part of the solution.

- ii) The applicant shall have a minimum experience of the following:
- a) installation, operation and management of 100 wireless Base Stations of voice telephony/broadband services (of digital technology) during the last 5 years, from the date of the issuing of the tender, and
 - b) subscriber base of at least 10, 000, comprising mobile voice and/or wireless broadband customers, on the date of the issuing of the tender.
- iii) The applicant must have minimum financial eligibility requirement, i.e. minimum net worth in Indian Rupees, as specified in the **Table I**, as per the audited annual report of the financial 2009-10 year as on 31.03.2010.

•	Net Worth
=	Subscribed and Paid-up Equity share capital
Add:	Reserves
Subtract:	Revaluation Reserves
Subtract:	Intangible Assets
Subtract:	Miscellaneous Expenditures to the extent not written off
Subtract:	Any other Accrued Liabilities

- iv) An applicant can take 100% benefit of the technical capability and financial capability of its parent company for the purpose of evaluation. Any company will be required to have at least 26% equity either directly or indirectly in the applicant company to be considered as its parent company.

(For further details of the above cited eligibility criteria, please refer to the relevant clauses of the tender document)

IV) Bid Security/ Earnest Money

The bidder for the scheme shall furnish a bank guarantee, issued by any scheduled bank, for the amount towards Earnest Money in Indian of Rupees., as specified in the **Table I**.

V) Purchase of Tender Document

The Bidders may purchase the tender document along with the relevant specifications from **the USOF Section, Room No.503, Sanchar Bhawan, 20, Ashoka Road, New Delhi** on payment of Rs. 50, 000/ (Rs. Fifty thousand only), non refundable, in the form of a Account Payee Demand Draft drawn on any Scheduled Bank in New Delhi, in favour of the **“Pay & Accounts Officer (HQ), Department of Telecom, New Delhi”**. The tender document may be purchased on any working day between 14.00 Hrs. to 17.00 Hrs. from --.04.2011 to --.04.2011. Only one Tender document is required to be purchased for submission of bids for any number of bidding units. The tender document is also available on USOF website www.usof.gov.in which can be used only for information by the interested parties.

Director (BB), USOF

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GENERAL INFORMATION ABOUT THE TENDER
FOR RURAL WIRELESS BROADBAND SCHEME FOR SETTING UP &
MANAGEMENT OF WIRELESS BROADBAND NETWORK AND
PROVISION OF BROADBAND SERVICES
IN
SPECIFIED RURAL AND REMOTE AREAS
UNDER
INDIAN TELEGRAPH RULES AMENDED VIDE
INDIAN TELEGRAPH (AMENDMENT) RULES, 2006 & 2008
STREAM-IV

F. No. 30-160-2/Wireless_BB/2006-USF

1.1 BACKGROUND OF USO FUND

- 1.1.1 The New Telecom Policy'99 envisaged provision of access to basic telecom services at affordable and reasonable prices in rural and remote areas. The financial resources for meeting the Universal Service Obligation (USO) are being realized and collected by way of Universal Service Levy (USL), which is a specified percentage of the revenue earned by the operators holding different types of licenses.
- 1.1.2 The Universal Service Obligation Fund has come into force from 01.04.2002 under the Indian Telegraph Act 1885 as amended by Indian Telegraph (Amendment) Act, 2003. The Indian Telegraph Act has further been amended through the Indian Telegraph (Amendment) Ordinance 2006 & 2008. The implementation of USO Fund is governed by the Indian Telegraph (Amendment) Rules, 2004 and Indian Telegraph (Amendment) Rules, 2006 & 2008 framed there-under.
- 1.1.3 The Universal Services Obligation Fund (USOF) has been established with the primary objective of providing access to the telegraph services to people in the rural and remote areas at affordable and reasonable prices. Universal access levy @ 5% of the adjusted gross revenue of telecom service providers is collected and credited to the Consolidated Fund of India and made available to the USOF after due appropriation of the Parliament. The USOF assists schemes only in the rural and remote areas.
- 1.1.4 In order to bring provisioning of broadband connectivity to the rural areas under the purview of the USOF, the Indian Telegraph Rules have been amended, and stream IV has been added under the title "Provision of broadband connectivity to villages in a phased manner".

1.2 RURAL TELECOM SCENARIO

- 1.2.1 Rural India comprises of about 6,38,596 villages out of which about 44,865 villages are uninhabited as per the Census 2001. The remaining 5,93,731 inhabited villages account for 72.22 % of the total population of India. Out of 593 districts in India, only 9 are entirely urban and the remaining 584 districts have rural areas under them.
- 1.2.2 USOF had launched the Rural Wireline Broadband Scheme in January 2009 for providing broadband services in rural and remote areas by leveraging the existing rural exchanges infrastructure and copper wire-line network. However, as the number of Rural Exchanges/DSLAMs are limited to about 28,000 only, this scheme would cater to about 18 lakh connections. Further, as the broadband coverage is typically within 3 km of the DSLAM, this scheme has only limited capacity to cover rural areas as such areas have widely dispersed subscriber base spread over large geographical areas. Hence for provision of BB to such far flung areas, it has been under the consideration of the DoT to deploy a Wireless BB Network, which may cater to the subscribers, spread over large areas.
- 1.2.3 The Rural Wireless Broadband Scheme is proposed to be launched for providing broadband service to the specified Census Villages, as per Census 2001. All inhabited Census Villages (as per Census 2001) in rural areas are to be covered under this scheme with wireless broadband services, except for those villages which do not have mobile voice phone connectivity/coverage.
- 1.2.3.1 The USOF envisages providing financial assistance by way of subsidy support for creation and operation of the incremental wireless broadband infrastructure to provide wireless broadband services by leveraging the existing rural telecom infrastructure.
- 1.2.3.2 For the purpose of determination of bidding units for benchmark subsidy rates, Licensed Service Area has been determined as a Unit for bidding. Exception, if any, shall be explicitly mentioned in the document for the purpose of the scheme.
- 1.2.3.3 In each bidding unit, covering the specified districts, Two (2) Universal Service Bidders (USPs) will be selected for implementation of the scheme. Out of which, one USP will be BSNL. One USP slot will be offered for bidding out amongst eligible bidders, in which BSNL will not participate. The eligible bidder quoting the lowest subsidy shall be the L1 bidder to be selected as per the outcome of this bidding process. It may so happen that L1 bidder might have got some subsidy for the same purpose and the same will be deducted from the L1 rate for payment of the actual subsidy support. The successful bidder shall certify the fact of having received subsidy along with details of the same, if applicable. Alternatively, he would certify the fact that he has not received any subsidy for this purpose.
- 1.2.3.4 BSNL as the second USP will be offered the L1 rate discovered through the bidding process. Similarly as above, any subsidy received by BSNL for the same purpose, after similar certification as referred to in the above para from BSNL, shall be deducted while finalizing the subsidy rate for BSNL.

- 1.2.3.5 In every bidding unit, each USP shall build its separate wireless broadband network, which shall include at least all systems/elements of Base Station equipment and associated antennas.
- 1.2.4 The Stream-IV of the Indian Telegraph (Amendment) Rules, 2006 inter-alia, provides for Provision of Broadband connectivity to villages in a phased manner. The present tender is to implement this aspect of provisions contained in the Indian Telegraph Rules and has been formulated under the powers vested in the Administrator in accordance with Rules.

1.3 NOTICE INVITING TENDER

- 1.3.1 On behalf of the President of India, sealed tenders are hereby invited from the licensed Cellular Mobile Service Providers (CMSPs), Unified Access Services Licensees (UASLs), Internet Service Providers (ISPs) of category A or B having licence based on the ISP guidelines dated 24.08.2007; **for setting up and management of wireless broadband network** and provision of terrestrial wireless broadband services to the specified rural and remote areas of the bidding units, which shall be the DoT Licensed Service Areas, as detailed in **Annex I-1**. Bids can be submitted for one or more bidding unit(s) by purchasing only one Tender Document but bidding unit-wise Earnest Money Bank Guarantee (EMBG), applicable against the respective bidding unit(s) for which bids are submitted, shall be furnished.
- 1.3.2 The bidder shall have a valid DoT license, as indicated above, for the subject bidding unit, and also adequate spectrum, directly provided to it, through WPC frequency assignment/wireless operating license license and can also operate in the unlicensed frequency bands after following the WPC's due procedure, as applicable, in the subject bidding unit for provisioning of the said wireless broadband services, as part of the solution.

1.4 DESCRIPTION AND SCOPE OF THE SCHEME

The proposed scheme envisages setting up and management of the Terrestrial Wireless Broadband Network and provision of wireless broadband services, based upon an open architecture with a technology neutral approach.

1.4.1 SCOPE OF WORK IN THE SCHEME

USO Fund intends to provide subsidy support to the Telecom Service Provider(s), selected by Administrator USOF, through an open tendering process, and hereafter known as "Universal Service Provider(s) (USPs)", for setting up and management of wireless broadband network and provision of wireless broadband services to the specified rural and remote areas of the country by leveraging the existing telecom infrastructure, thus requiring incremental effort.

Facilitation by USOF shall be in form of subsidy support as a percentage of Capital Recovery for setting up and management of wireless broadband network. The Universal Service Providers shall be required to install at least the following at the sites and provide wireless broadband services:

- (i) Terrestrial Wireless Broadband Base Stations along with associated antennas, Battery, Power Plant, Engine Alternator, etc. as specified in the Tender Document. Considering the Government's emphasis on environmental friendly nature of **Green /Renewable energy sources, such as solar, wind, etc.**, the bidders are encouraged to deploy such energy sources, along with Power Plant, Battery back-up and Diesel Engine Alternator set, that may result in operation of the diesel engine alternator for less No. of hours. In case, the bidders harness suitable non-conventional sources of energy, they may become eligible for subsidy from Ministry of New & Renewable Energy (MNRE), Government of India, as per the prevailing rules, as amended from time to time.
- If a Base Station site, comprising Terrestrial Wireless Broadband Base Station along with associated equipment (if any) and Backhaul equipment, has power requirement of up to 100 watts only, then a purely green/renewable power solution (such as solar, wind) with adequate battery back up of minimum 72 hours for meeting the said site's power requirement may be provided, without provision of Engine Alternator. However, the aforesaid green/renewable power solution shall have suitable provision for charging the batteries through AC power.
- (ii) Backhaul equipment along with all associated elements/antennas, as specified in the Tender Document

Further, the USP(s) shall be responsible for installing all necessary equipment, including the above, required for meeting the deliverables of the scheme, and provision of the services. Furthermore, the USP shall be responsible for all aspects of provision, operation, maintenance and management of Wireless Broadband Services as per the terms and conditions of the Service License, TRAI, Tender Document, etc.

1.4.2 OUTLINE OF THE USOF'S RURAL WIRELESS BROADBAND SCHEME

- i) **Objective:** The scheme envisages provision of terrestrial wireless broadband coverage to the specified villages (about 5.5.lakh as indicated in Annex I) by leveraging the existing telecom infrastructure in rural and remote areas. Unless otherwise specified, all the inhabited Villages in rural areas (as per Census 2001), except for the villages not covered with mobile voice telephony services, are to be broadband (BB) enabled through this scheme.

Facilitation by USOF shall be in form of subsidy support as a percentage of Capital Recovery for setting up of the **incremental** infrastructure.

- ii) **Deliverables/Coverage objectives**

The wireless broadband services, meeting the following, will be available to the customers on demand with overall "**contention ratio**" of 1:20 or better:

- Seamless coverage of all target villages
- **Speed** :Broadband speed in fixed/nomadic mode will be 512 kbps or above, upgradable to 2 Mbps.
- **Nomadcity:** It shall be able to support a minimum speed of 512 kbps

or above, upgradable to 2 Mbps on demand, to each user, in nomadic mode.

- **Mobility** - Broadband speed in mobile condition will be up to 512 kbps, upgradable to 2 Mbps, at a vehicular speed of at least 30 km/hour,.
- **Roaming**- The solution shall support wireless access to roaming subscribers/clients.

iii) Capacity creation

- To create a peak capacity/throughput of 10 Mbps /sector to serve the customers with the above-mentioned speeds in order to enable broadband proliferation in rural areas. Suitable number of such sectors shall be installed at each Base Station to cover the specified areas in a seamless manner.

iv) QoS

- The QoS for the Wire-less broadband connections will be as prescribed by TRAI from time to time.
- The QoS will be within the framework of the Quality of service Conditions of the respective DoT License of the Universal Service Provider (USP), as applicable.

v) Technology

- The scheme is technology agnostic and bidders are free to choose any appropriate standard technology to fulfill the above objective.

vi) No. of Universal Service Providers to be selected for implementing the scheme:

- 2-USP(s): **BSNL+ 1**
- One slot will be put for bidding,
- One Slot reserved for BSNL at L1 price discovered through bidding of one slot
- If a USP is already availing any subsidy for the same purpose, the same will be deducted from USOF subsidy.
- If in a bidding unit, no responsive bids are received, then BSNL will be awarded that bidding unit at benchmark rate.

vii) Bidding areas

- Areas of bidding will be DoT Licensed Service Areas, covering the specified districts as per Annex I-1, (total 19 in number).

viii) Eligible Service Providers

- Valid CMSP/ UASL/ISP Licensees of category A or B based on the ISP guidelines dated 24.08.2007, for the subject bidding unit.

- Such bidder should have also adequate spectrum, directly provided to it, through WPC frequency assignment/wireless operating license and can also operate in the unlicensed frequency bands after following the WPC's due procedure, as applicable, in the subject bidding unit for provisioning of the said wireless broadband services, as part of the solution.

ix) Setting Up the Wireless Broadband Network

As per clause 1.4.1.

x) Accessing Broadband at user end:

Service Providers will provide CPEs, Dongle, handsets, etc. to the users as per their demand. However, the USOF shall subsidize only the CPEs for access of wireless BB in fixed mode for all users.

1.5 USOF SUPPORT

Subsidy support

Recognizing that present/near-term revenue derived from the provision of wireless broadband services in rural and remote areas may not be adequate to attract the required quantum of investment, USOF intends to provide financial subsidy support by way of a percentage of capital recovery for the same.

The subsidy, at the representative rates as arrived at through a single stage bidding process, after adjusting any subsidy received for this purpose, shall be disbursed in phased manner against the commissioning and rollout of the wireless broadband networks in the bidding units, subject to the terms and conditions specified in the Financial Conditions of the Tender Document.

The successful bidder(s) shall set up (i.e. procure, install, test, commission, operate and maintain) the all the required broadband equipment/network and provide broadband services as per the terms and conditions laid down in the Agreement.

- 1.6 The Bidders may purchase the tender document along with the relevant specifications from **the USOF Section, Room No.503, Sanchar Bhawan, 20, Ashoka Road, New Delhi** on payment of Rs. 50, 000/ (Rs. Fifty thousand only), non refundable, in the form of a Account Payee Demand Draft drawn on any Scheduled Bank in New Delhi, in favour of the **“Pay & Accounts Officer (HQ), Department of Telecom, New Delhi”**. The tender document may be purchased on any working day between 14.00 Hrs. to 17.00 Hrs. from --.04.2011 to --.04.2011. Only one Tender document is required to be purchased for submission of bids for any number of bidding units. The tender document is also available on USOF website www.usof.gov.in which can be used only for information by the interested parties.

SECTION - II**TENTATIVE SCHEDULE OF IMPORTANT EVENT DATES***(Unless otherwise notified separately)*

1.	Start of sale of Tender Document	16.05.2011
2.	Receipt of letters seeking clarification, if any, from Bidders.	22.05.2011
3.	Pre-bid conference	23.05.2011
4.	Issue of comprehensive clarifications along with draft Agreement document	30.05.2011
5.	Last date for sale of tender document	07.06.2011
6.	Last date for submission of bids for pre-qualification, first financial bids, earnest money bank guarantee	08.06.2011
7.	Opening of Pre-Qualification Bids	08.06.2011

NOTE:

The dates of events may be changed at the discretion of Administrator without assigning any reason. Such change of dates, if any, will be suitably notified only to those who purchased the tender document. The notification will also be put up on USOF website www.usof.gov.in

SECTION - III

GENERAL CONDITIONS

3.1 INTRODUCTION

- 3.1.1** For and on behalf of the President of India, the Administrator, Universal Service Obligation Fund, Department of Telecom, proposes to enter into Agreements with Universal Service Providers (USPs) setting up & management of wireless broadband network and **for provision of Wireless Broadband Services** in rural and remote areas of the country in the specified bidding unit as described in **Section-I** and as per details provided in Annex I-1.
- 3.1.2** Technical, Commercial, Operating, Financial Conditions, Terms of Financial Bid, Special Conditions and other General conditions are given in this Tender Document. **The Agreements containing terms and conditions will be broadly in line with this** tender document including clarification(s) issued, if any. The Agreement(s) will be signed with the successful bidder(s).
- 3.1.3** The Universal Service Provider(s) {USP(s)} shall to perform the obligations under this Agreement during the validity period of the Agreement. The terms and conditions of this tender document apply at all stages of the bidding process (from submission of initial bid till signing of the agreement) and the bidders must ensure compliance with these conditions at all stages of the process. For non-compliance with these conditions, Administrator reserves the right to disqualify any bidder, at any stage of the bidding process.

3.2 ELIGIBLE BIDDERS

Subject to the terms & conditions of the respective DoT license issued, Cellular Mobile Service Providers (CMSPs), Unified Access Services Licensees (UASLs), Internet Service Providers (ISPs) of category A or B having license based on the ISP guidelines dated 24.08.2007, for the subject bidding unit, as indicated in Annex I-1, shall be eligible to participate in the bid for the respective bidding unit. The bidder shall have a valid license, as indicated above, for the subject bidding unit, and also adequate spectrum, directly provided to it, through WPC frequency assignment/wireless operating license and can also operate in the unlicensed frequency bands after following the WPC's due procedure, as applicable, in the subject bidding unit for provisioning of the said wireless broadband services, as part of the solution.

- 3.2.1** The Applicant should furnish a copy of the relevant pages of License, issued by DoT, and WPC frequency assignment/wireless operating license for operating the wireless broadband services and a copy of the relevant document issued by WPC, as applicable, if operating in the unlicensed frequency bands after following the WPC's due procedure), as documentary evidence in support of its eligibility. Applicants shall furnish documentary evidence, including allocation/assignment letters, in support of the spectrum allocation from the WPC.
- 3.2.2** The applicant shall have a minimum experience of the following, as per **Annex-V-1**, duly certified by the auditor:

- a) installation, operation and management of 100 wireless Base Stations of voice telephony/broadband services (of digital technology) during the last 5 years, from the date of the issuing of the tender, and
- b) subscriber base of at least 10, 000, comprising mobile voice and/or wireless broadband customers, on the date of the issuing of the tender.

Applicants shall furnish documentary evidence in support of the experience in the form of completion certificate from the duly authorized owner of the network.

3.2.3 The applicant must fulfill the following minimum financial eligibility requirements
Net Worth: Minimum Networth, as indicated in Annex I-1, as per the audited annual report of 2009-10 as on 31.03.2010:

- **Net Worth**
- = Subscribed and Paid-up Equity share capital
- Add: Reserves
- Subtract: Revaluation Reserves
- Subtract: Intangible Assets
- Subtract: Miscellaneous Expenditures to the extent not written off
- Subtract: Any other Accrued Liabilities

For the purposes of the financial criteria, only unconsolidated audited annual accounts of the applicant (bidding company) shall be used. Applicants shall furnish documentary evidence of their financial capability as defined here in the format enclosed at **Annexure-V-2** to this document. A copy of the audited annual accounts of the applicant and parent company (if applicable) as per schedule VI of the companies act, shall also be submitted along with the tender (**Annexure-III-8**).

3.2.4 An applicant can take 100% benefit of the technical capability and financial capability of its parent company for the purpose of evaluation. Any company will be required to have at least 26% equity either directly or indirectly in the applicant company to be considered as its parent company. If an applicant wishes to draw upon the technical and financial capability of its parent company, it will have to submit a legally binding undertaking supported by a board resolution from its parent company as per **Annexure-III-2** at the time of the submission of the tender document (on qualification) that all the equity investment obligations of the applicant shall be deemed to be equity investment obligations of the parent company and in the event of any default the same shall be met by the parent company.

The determination of the relationship of parent with the applicant company shall be as on **31st March 2010**. The documentary evidence to establish such relationship shall be furnished by the bidder along with the response to this tender.

3.3 COST OF BIDDING

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

3.4 THE BID DOCUMENTS

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

3.4.2 The Tender Document shall be supplied along with a signed copy of the Financial Bid Form. For purposes of information, the copy of the Tender Document can be downloaded from the USOF Website. In case, any deviation is found in the downloaded copy of the Tender Document, the contents of the hardcopy supplied as Tender Document shall prevail. The bidders are required to submit the Financial Bids in Financial Bid Form supplied along with the Tender Document purchased from the USO Fund as per **Clause 1.3 Section-I: General Information about the Tender.**

3.5 CLARIFICATION ON TENDER DOCUMENT

3.5.1 Prospective bidders, if they so desire, may send any of their queries on the conditions of this Tender Document in writing or by FAX on 011-23372365 to **Director (BB) USOF, DOT, Room No.503, Sanchar Bhawan, Ashoka Road, New Delhi-110 001**, so as to reach latest by 1600 hours of _____. The queries so received shall be clarified in the pre-bid conference to be held on _____. No new queries shall be taken up in the pre-bid conference.

3.5.2 Consolidated replies to the relevant queries will be communicated in writing by the Administrator to all the prospective bidders, which shall form part of the Tender Document.

3.6 AMENDMENT TO BID/TENDER DOCUMENTS

3.6.1 At any time, before the last date of submission of Bids, the Administrator may, suo-moto or in response to a clarification requested by a prospective bidder, modify the Tender Document by making suitable amendments.

3.6.2 The amendments, if any, will be notified in writing or by FAX to all prospective bidders who purchased the Tender Document. In addition, the amendments shall be notified on USOF website www.usof.gov.in. These amendments shall form part of Tender Document and shall be binding for compliance on the bidders.

3.6.3 In order to afford time to prospective bidders for taking the amendments into account while preparing their bids, the Administrator may extend the deadline for the submission of bids

PREPARATION OF BIDS

3.7 DOCUMENTS COMPRISING THE BID

The Bid prepared by the Bidder shall comprise all supporting documents as required in this complete tender document. A Check List is given at **Annexure III-3** for assistance of the Bidder. The check list is not to be treated as exhaustive and the Bidders must go through the tender document thoroughly and ensure that all

information is furnished. The bid prepared by the bidder shall comprise the following components:

- (a) Documents in accordance with **Clause 3.2 of Section-III: General Conditions** that the bidder is eligible to bid and is qualified to perform the contract if his bid is accepted.
- (b) Bid Security/ EMBG furnished in accordance with **Clause 3.10 of Section-III: General Conditions**.
- (c) Compliance statement as per the specified format in **Annexure-III-5**.
- (d) Financial Bid Form completed in accordance with **Annexure-VIII-1**.

3.8 FINANCIAL BID FORM

The bidder shall complete the financial bid form **only in the signed Financial Bid Form supplied along with the Tender Document**, indicating the rates to be quoted against the benchmark value as per details given in **Section-VIII: Terms of Financial Bid** of the Tender Document.

3.9 DOCUMENTS TO BE SUBMITTED ESTABLISHING BIDDER'S ELIGIBILITY AND PRE-QUALIFICATION

Following Documents are required to be submitted along with the **pre-qualification Bid (s)**:

- (i) A copy of the CMSP/ UASL/ISP (category A & B, based on the ISP guidelines dated 24.08.2007) DoT License Agreement, as applicable, along with subsequent amendments, if any, for the subject bidding unit of the scheme.
- (ii) Details and a copy of the assigned spectrum, directly provided to it, through WPC frequency assignment/wireless operating license and a copy of the relevant document issued by WPC, if operating in the unlicensed frequency bands after following the WPC's due procedure, as applicable in the subject bidding unit for provisioning of the said wireless broadband services, as part of the solution, for this Scheme as per **Annexure-II**.
- (iii) In case, the bidder has drawn upon 100% technical and financial capability of its Parent company for the purpose of evaluation, a legally binding undertaking supported by a Board Resolution, as per the format prescribed in **Annexure-III-2**, is to be submitted along with the Bid from its Parent Company indicating the share of Parent Company in the Applicant Company and that all the equity investment obligations of the bidder shall be deemed to be equity investment obligations of its Parent Company and in the event of any default, the same shall be met by the Parent Company.

- (iv) Earnest Money Bank Guarantees (EMBGs) for the sum as specified in **Clause 3.10** in prescribed manner as per **Annexure-III-6**.
- (v) Compliance Statement with General, Technical, Commercial, Financial, Operating, Special Conditions and Terms of Financial Bid of the Tender Document in the form of the Compliance Statement (**Annexure –III-5**).
- (vi) Details of technical experience as per clause No. 3.2.2, along with supporting documents as per **Annexure-V-1**.
- (vii) Proof of purchase of Tender Document from USO Fund.
- (viii) Power of Attorney in favour of Authorized Signatory along with supporting Board Resolution as per **Annexure-VI**.
- (ix) An Affidavit from the Bidder that he or his parent company, if applicable is not black-listed by DoT or by any other Government of India Department/ organization /undertaking/Autonomous body/society, etc. on the date of submission of the bid and if subsequent to the submission of the bid, the bidder is blacklisted, the same shall be brought to the notice of the Administrator, USOF within a period of 10 days. The blacklisting of the bidder may even invite cancellation of the bid / termination of the Agreement, as applicable.
- (x) **Description of the solution offered:**

As part of the pre-qualification, the bidders must submit the description of the proposed solution as per clause 5.6 (Section V: Technical Conditions) indicating the salient features of the approach and philosophy adopted to achieve the deliverables of the scheme. It shall clearly explain, inter-alia, as to how the objectives, deliverables and other requirements of the scheme shall be met by the bidder through the offered solution within the stipulated time frame.
- (xi) Documents required to be submitted along with the **Financial Bid (s):** Financial bid form **Annexure-VIII-1** and **Compliance Statement as per Annexure III-5**.
- (xii) **Networth details as per Annexure V-2.**

A bid, not secured with **any one of the following**, is liable to be rejected by the Administrator being non-responsive at the bid opening stage and returned to the bidder unopened.

3.10 BID SECURITY/ EARNEST MONEY

The bidder shall furnish a Bank Guarantee issued by any Scheduled Bank for the amount towards Earnest Money as shown against the Service Area as given in Annex I-1-valid for 45 days beyond the initial bid validity of 180 calendar days i.e. 225 days

(and extendable at the request of the Administrator for a further period of 180 days) for the specified Service Areas in the prescribed format as given in **Annexure-III-6**.

3.10.1 After signing of the Agreement, the Earnest Money Bank Guarantee will be returned to the successful bidder(s). The bank guarantees of others, unless otherwise forfeited shall, also be returned within seven days after signing of Agreement with successful bidder(s).

3.10.2 A bid, not secured with EMBG as indicated above, shall be summarily rejected by the Administrator being non-responsive at the bid opening stage and returned to the bidder unopened.

3.10.3 The bid security may be forfeited:

(a) If the bidder withdraws his bid during the period of validity of bids

(b) In the case of the successful bidder, if the bidder fails:

(i) **To sign the Agreement in accordance with Clause 3.25 of Section-III: General Conditions, OR**

(ii) **To furnish Performance Bank Guarantee in accordance with Clause 3.25 of Section-III: General Conditions**

In case of Bid security forfeiture, under **Clause 3.10.3** above, the bidder will not be eligible to participate in any Tender floated by USO Fund for three years from the date of issue of LOI.

3.11 PERIOD OF VALIDITY OF BIDS

3.11.1 The offer contained in the bid shall remain valid for a minimum period of 180 calendar days from the date of bid opening, further extendable up to another 180 days at the request of the Administrator. The extension shall be with the consent of the bidder company. The period during which there is any stay on the bidding process by a court or tribunal shall be excluded while counting the number of days stated above.

3.11.2 A bid valid for a shorter period shall be rejected by the Administrator being non-responsive.

3.11.3 Under exceptional circumstances, the Administrator may request the consent of the bidder for an extension of the period of bid validity. The request and the response thereto shall be made in writing. The bid security (EMBG) provided under **Clause 3.10** shall also be suitably extended. The bidder may refuse the request without forfeiting his bid security. A bidder accepting the request for extension will not be permitted to modify his bid.

3.12 FORMAT AND SIGNING OF BID

3.12.1 The bidder shall prepare one complete set of original bid (both Prequalification and Financial and make 4 copies of the same clearly marking one as **‘Original Bid’** and

remaining 4 as ‘**Copy No:1, Copy No:2, Copy No:3, & Copy No:4**’. In the event of any discrepancy between the copies, the original shall govern.

- 3.12.2** The original and all copies of Bid shall be typed or printed and all the pages numbered consecutively and shall be signed, **except for un-amended printed literatures**, by the bidder or a person or persons duly authorized to bind the bidder to the contract. The letter of authorization shall be indicated by written power-of-attorney accompanying the bid.
- 3.12.3** The first copy shall be marked as ‘**ORIGINAL**’ both for **Pre-Qualification** and **First Financial Bid(s)** of the Bid and shall be duly signed in ink on each page by the authorized signatory of the Bidder. The other four photocopies of the original copy shall be marked as ‘**COPY No. _____**’ duly signed on each page. Each page of the Bid is to be numbered.
- 3.12.4** The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder in which case such corrections shall be signed by the person or persons signing the bid.

SUBMISSION OF BIDS

3.13 SEALING AND MARKING OF BIDS

- 3.13.1** The bids shall be submitted in two separate sealed covers – **Sealed Cover-I for Pre-Qualification Bid & Sealed Cover II for Financial Bid**.
- 3.13.2** Bids can be submitted for one or more Service Area(s) as stated in **Section-I: Notice Inviting Tender** by purchasing only one Tender Document but Service Area wise Earnest Money Bank Guarantee applicable for the respective Service Areas shall be submitted.
- 3.13.3** **Sealed Cover-I** shall contain **five(5 Nos.) copies of Pre-Qualification Bid**, the first copy marked “**ORIGINAL**” and four (4 Nos.) copies, each marked “Copy No.----“ comprising compliance in the prescribed Proforma as per **Annexure-III-5** in respect of General, Commercial, Technical, Operating, Financial, Terms of Financial Bid and Special Conditions as per **Section-III to Section-IX, comprising non-price response to the tender**, and separate Earnest Money Bank Guarantee (EMBG) as per **Clause 3.10** along with the eligibility and other requisite documents as per **Clause 3.2** of the General Conditions of the Tender Document. It should be marked as **Bid for Pre-qualification** and bear the Tender No., Bidder’s name & address and total number of Service Areas for which bid is submitted, along with due date & time of tender opening.
- 3.13.4** **Sealed Cover-II** shall contain five (**5 Nos.**) copies of **Financial Bid**, the first copy marked “**ORIGINAL**” and four (4 Nos.) copies, each marked “Copy No.----“ along with duly filled in the signed Financial Bid Form as per **Clause 3.8** supplied along with the Tender Document. The envelope should be marked as **Financial Bid** and shall bear the name of bidder, their address and total number of bidding unit(s) (License Service Areas), for which bid is submitted, along with due date & time of tender opening. The Financial Bid shall be submitted in the prescribed manner for the specified bidding units.

Bid for the Scheme	
Sealed Cover-I	Sealed Cover-II
Pre-Qualification Bid (5 Copies)	Financial Bid (5 Copies)
<ul style="list-style-type: none"> • Compliance Statement (Annexure-III-5) • Non-price response to the tender • EMBG as per Clause 3.10 • Eligibility and other requisite documents as per Clause 3.2 & 3.9 	<ul style="list-style-type: none"> • Financial Bid (Annexure-VIII-1) • Compliance Statement (Annexure-III-5)

3.13.5 The Pre-Qualification Bid in **Sealed Cover-I**, not accompanied by proper Earnest Money Bank Guarantee, in the manner prescribed hereto shall be summarily rejected.

3.13.6 The Pre-Qualification Bid in **Sealed Cover-I** not accompanied by Eligibility and other requisite documents as per **Clause 3.2** and Compliance Statement (**Annexure-III-5**), in the manner prescribed hereto are liable to be rejected.

3.13.7 The first copy shall be marked as '**ORIGINAL**' both for **Pre-Qualification** and **Financial Bid** of the bid and shall be duly signed in ink on each page by the authorized signatory of the bidder. The other four photocopies of the original copy shall be marked as '**COPY No. _____**' duly signed on each page. Each page of the bid is to be numbered.

3.13.8 All the covers should be sealed separately. If the envelopes are not sealed, marked and submitted as prescribed above, the Bids are liable to be rejected.

3.14 DUE TIME AND DATE OF BID SUBMISSION

3.14.1 The bid documents in sealed covers as specified above shall reach the Administrator, USOF by 16 00 hrs on -----2011 at the following address:

**Director (BB), USOF
Room No. 503, Sanchar Bhawan,
20 Ashoka Road, New Delhi - 110 001**

3.14.2 The bids may be sent by registered post or delivered in person at the address as given in **Clause 3.14.1** above. The responsibility for ensuring that the bids are delivered in time would vest with the bidder. The Administrator shall not be responsible if the bids are delivered elsewhere.

3.15 VENUE OF TENDER OPENING

Bids will be opened in Committee Room, 2nd Floor, Sanchar Bhavan, 20, Ashoka Road, New Delhi-110001 on ----at ----- 16.00 Hrs. on the due date. If due to administrative reason, the venue of Bid opening is changed, it will be displayed prominently on Ground Floor lifts and at reception office of Sanchar Bhavan, DoT, New Delhi.

3.16 DEADLINE FOR SUBMISSION OF BIDS

3.16.1 Bids must reach the Director (BB), USOF, at the address specified above at **Clause 3.14** not later than the date and time specified therein.

3.16.2 The Administrator may, extend the deadline for submission of bids and subsequent milestones as given in **Section-II: Schedule of Important Events** of this Tender document for the submission of bids by amending the Tender Document, and in such case all rights and obligations of the Administrator and bidders shall be subject to the extended deadline.

3.17 LATE BIDS

Any bid, received after the deadline, as per 3.14 & 3.16, for submission of bids prescribed by the Administrator, **shall be rejected and returned unopened to the bidder.**

3.18 MODIFICATION AND WITHDRAWAL OF BIDS

3.18.1 The bidders are allowed to withdraw their bids through written request before the scheduled time of submission of bids but not later. In case amendment to Tender Document is issued after submission of bid, modifications to the bid can be submitted before the scheduled time of submission of bids.

3.18.2 The bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched as required in the case of bid submission in accordance with the provision of **Clause 3.14 & 3.16**. A withdrawal notice may also be sent by FAX but followed by a signed confirmation copy by post **not later than the deadline for submission of bids.**

3.18.3 No bid shall be modified subsequent to the deadline for submission of bids.

3.19 COMPLIANCE

3.19.1 Compliance with general, technical, commercial, financial, operating and special conditions and terms of financial bid in the prescribed proforma as per **Annexure-III-5** shall be submitted. **it should be clearly understood that any deviation shall not be accepted.**

3.19.2 If at any later date, it is found that averments/facts submitted by the bidder in the bid, based on which the bidder has been considered eligible or successful or has entered into the Agreement, is incorrect or false, Administrator reserves the right to disqualify the bidder. Agreement signed with a bidder, based on such false information, shall be cancelled without any notice and any other remedies available in terms of the Agreement shall be invoked.

BID OPENING AND EVALUATION

3.20 OPENING OF BIDS

3.20.1 The Administrator through his nominee committee will open bids contained in **sealed cover-I**, in the presence of bidders' authorized representatives, on

_____ at _____ hrs. The pre-qualification bids under **sealed cover-I**, which are accompanied by requisite EMBG, will only be considered. The bidder's authorized representative(s) who is present shall sign an attendance sheet. The letter authorizing the representative(s) to attend the bid opening shall be submitted on the letter head of the bidder company, signed by the authorized signatory, before they are allowed to participate in the bid opening. The bidders may ensure that their authorized representative(s) attend the bid opening at first and every subsequent stage. The bids shall, however, be opened even if the authorized representatives of a bidder company are not present in bid opening.

- 3.20.2 A maximum of two representatives from any bidder company shall be permitted to attend the bid opening.
- 3.20.3 The bidder's names, modification, bid withdrawals and the presence or absence of the requisite bid security deposit (EMBG) and such other details as the Administrator or authorized person deems fit shall be announced at the time of bid opening.
- 3.20.4 Similar steps shall be taken for opening of subsequent financial bids.
- 3.20.5 If the date fixed for opening of bids is subsequently declared a holiday by the Government, a revised date will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

3.21 CLARIFICATION ON BIDS

- 3.21.1 To assist in the examination and evaluation, the Administrator or his representative may ask the bidder for any clarification on their bids. The request for the clarification and the response thereof shall be made in writing within the stipulated time, if clarifications are asked for by the Administrator. However, no post bid clarification at the initiative of the bidder shall be entertained.

3.22 PRELIMINARY EVALUATION OF THE BIDS/ PRE-QUALIFICATION

- 3.22.1 The Administrator shall evaluate the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the required documents have been furnished and properly signed and whether the bids are generally in order.
- 3.22.2 Arithmetical errors shall be rectified on the following basis. If there is a discrepancy between words and figures, the amount in words shall prevail. If the bidder does not accept the correction of the errors, his bid shall be rejected.
- 3.22.3 Prior to the detailed evaluation pursuant to **Clause 3.23**, the Administrator will determine the substantial responsiveness of each bid to the Tender Document. **For purposes of these clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Tender Documents without material deviations.** The Administrator's determination of bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

- 3.22.4** A bid, determined as substantially **non-responsive** will be rejected by the Administrator and shall not subsequent to the bid opening be made responsive by the bidder by correction of the non-conformity.
- 3.22.5** The Administrator may waive any minor infirmity or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any bidder.
- 3.22.6** The bids will be technically and commercially evaluated giving due consideration for their conformity to the eligibility conditions and compliance with general, technical, commercial, operating, financial and special conditions and terms of financial bid as laid down in this tender document. The qualified bidders will be short-listed and their financial bids (under **sealed cover-II**) will be opened, on a date as given in **SECTION-II: SCHEDULE OF IMPORTANT EVENTS**, in the presence of the authorized representatives of the short-listed bidders, if they desire to be present. All the criteria have to be met for the purpose of pre-qualification and there is no weightage attached to any of the pre-qualification parameters. However, failure to meet any of these criteria will disqualify the bidder.

3.23 EVALUATION AND COMPARISON OF SUBSTANTIALLY RESPONSIVE BIDS

- 3.23.1** The Administrator shall evaluate in detail and compare the bids previously determined to be substantially responsive pursuant to **Clause 3.22**.
- 3.23.2** The evaluation and comparison of responsive bids shall be done on the basis of the rates quoted against the benchmark values of the Financial Bid Form in **Annexure-VIII-1** and other terms and conditions under **Section-VII: Financial Conditions** & **Section-VIII: Terms of Financial Bid** of the Tender Document.

3.24 CONTACTING THE ADMINISTRATOR

- 3.24.1** No bidder shall try to influence the Administrator on any matter relating to its bid, from the time of the bid opening till the time the Agreement is signed.
- 3.24.2** Any effort by a bidder to modify his bid or influence the Administrator in the bid evaluation, bid comparison or signing of the Agreement shall result in the rejection of the bid by the Administrator.

SIGNING OF AGREEMENT

3.25 ENTERING INTO THE AGREEMENT

- 3.25.1** For and on behalf of the President of India, the Administrator, Universal Service Obligation Fund, (**Here-in-after referred to as “Administrator”**) proposes to enter into an Agreement with the successful Bidder (**Here-in-after referred to as “USP”**) in each Service Area for the above scheme.
- 3.25.2** A letter of intent (LOI) shall be issued to the successful bidder(s). Fifteen days’ time shall be given for acceptance of the LOI.

3.25.3 The successful bidder shall furnish a Performance Bank Guarantee(s) (PBGs) within 7 days after acceptance of LOI as specified in the tender document including any other payments as specified in LOI. No extension of time shall be permitted and the Agreement will be signed in accordance with the procedure prescribed in **SECTION-VII: FINANCIAL CONDITIONS & SECTION-VIII: TERMS OF FINANCIAL BID** of this Tender Document.

3.25.4 After acceptance of the LOI and submission of PBGS, the successful bidder(s) shall enter into an Agreement with the Administrator by signing the Agreement document by the specified date as mentioned in the LOI.

3.26 RIGHT TO VARY NUMBER OF VILLAGES

3.26.1 The Administrator shall have the right to increase or decrease up to 10% of the number of villages in a bidding unit (Service Area) as specified in the **ANNEXURE-I** without any change, in the representative rates so arrived at after the bidding process, or other terms and conditions at the time of signing of Agreement, subject to the condition that such changes will not have any additional financial implication.

3.27 RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Administrator reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to signing of Agreement without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds of Administrator's action.

3.28 ANNULMENT OF LETTR OF INTENT

3.28.1 Failure of the successful bidder to comply with the requirements, following the issuance of the LoI, shall constitute sufficient ground for the annulment of the award and the forfeiture of the bid security in which event the Administrator may enter into Agreement with any other bidder or call for new bids.

3.28.2 The Administrator reserves the right to blacklist a bidder from participating in other activity supported by the USO Fund for a suitable period in case he fails to honour his bid without sufficient grounds.

3.29 FRAUD AND CORRUPT PRACTICES

The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process and subsequent to the issue of the LOI and during the subsistence of the Agreement (with USOF). Notwithstanding anything to the contrary contained herein, or in the LOI or the Agreement, the Administrator shall reject a Bid, withdraw the LOI, or terminate the Agreement, as the case may be, without being liable in any manner, whatsoever, to the Bidder or Host Operator, as the case may be, if it determines that the Bidder or Host Operator, as the case may be, has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process. In such an event, the Administrator shall forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the

Administrator towards, inter alia, time, cost and effort of the USOF Administrator (USOFA), without prejudice to any other right or remedy that may be available to the USOFA hereunder or otherwise.

Without prejudice to the rights of the Administrator under **Clause 3.27** hereinabove and the rights and remedies which the Administrator may have under the LOI or the Agreement, if a Bidder or Host Operator, as the case may be, is found by the Administrator to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, or after the issue of the LOI or the execution of the Agreement, such Bidder or Host Operator shall not be eligible to participate in any tender or RFP issued by the Administrator USOF during a period of 2 (two) years from the date such Bidder or Host Operator, as the case may be, is found by the Administrator to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.

For the purposes of this Clause the following terms shall have the meaning hereinafter respectively assigned to them:

- (a) “**corrupt practice**” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the Administrator who is or has been associated in any manner, directly or indirectly with the Bidding Process or the LOI or has dealt with matters concerning the Agreement or arising therefrom, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Administrator, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process); or (ii) engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LOI or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOI or the Agreement, who at any time has been or is a legal, financial or technical Adviser to the Administrator in relation to any matter concerning the Project.
- (b) “**Fraudulent practice**” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process.
- (c) “**Coercive practice**” means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Bidding Process.
- (d) “**Undesirable practice**” means (i) establishing contact with any person connected with or employed or engaged by the USOFA with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and

- (e) “**Restrictive practice**” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

SECTION - IV

COMMERCIAL CONDITIONS

- 4.1** The Agreement, signed by the successful bidder, holding valid DoT license for CMSP/UASL/ISP Category (A or B) based on the ISP guidelines 24.8.2007, for providing wireless broadband services, with the Administrator, shall be subject to the terms and conditions of the respective licence, i.e. CMTS (Cellular Mobile Telephone Services)/ UASL (Unified Access Service Licensees)/ Internet Service Provider (ISP) License, as applicable, and WPC frequency assignment/wireless operating license and permission of operation in the unlicensed frequency bands after following the WPC's due procedure, as applicable, in the bidding unit for provisioning of the said wireless broadband services.
- 4.2** During the validity of the Agreement, the USP (s) shall set up and manage the necessary wireless broadband network to meet the deliverables as per this tender document and provide the wireless broadband services on demand, as per the rates and terms & conditions, prescribed in the tender and the Agreement entered with the Administrator.

4.3 SCOPE OF THE AGREEMENT

4.3.1 Responsibilities of the Universal Service Provider(s) (USP)

The USP(s) would be required to, interalia, create the requisite infrastructure for provision of wireless broadband services including the following activities:

- (i) The Bidder shall install the required broadband equipment of adequate capacity, such as **Base Stations**, associated antennas, adequate backhaul, core broadband equipment and all other necessary equipment like power plant, Batteries, Engine-Alternator, etc., *as per Standards & Specifications* given in **SECTION-V: TECHNICAL CONDITIONS**, and as required to provide the wireless Broadband services, as per the terms and conditions of this tender.
- (ii) The antennas, for the coverage of villages, are to be installed on the towers of suitable height as per the network design of the Bidders, depending on the technical requirements. **The towers should comply with the central/state Govt./Local bodies/TRAI/DoT statutory norms/rules/guidelines as applicable, including, DoT guidelines titled "Guidelines on Disaster Resistant Telecom Buildings and Towers – With special Reference to Earth-Quake & Cyclone(September 2005), issued vide DoT File No. 800-4/2001-VAS dated 24.10.2005.**
- (iii) The Bidder shall provide broadband modems such as Customer Premises Equipment (CPEs), Dongles, handsets, etc., to the subscribers as per their demand. However, the USOF shall subsidize only the CPEs for access to wireless broadband in fixed mode as part of the USOF tariff plan subscription.
- (iv) **Incremental infrastructure installed and commissioned under the scheme for provision of wireless broadband services by way of Base Stations along with**

associated antennas and Battery sets, installed and commissioned under this scheme, shall be brand new, whereas other equipment for which subsidy has been inbuilt in the benchmark, such as SMPS Power Plant, Engine Alternator, Backhaul, should not be more than 3 years old. All equipment, provided under the Scheme, should be as per network design & engineering, carried out by the bidders, as part of solution, to meet the deliverables. The new equipment shall be the one which has been procured not earlier than 12 months of submission of bid and has never been used earlier.

- (v) **Setting up, operation, maintenance and management of the Wireless Broadband Network built under the scheme:** The USP shall be solely responsible for setting up, operation & maintenance and management of the broadband infrastructure/equipment, provision of broadband services therefrom & their accounting/billing, as well as attending to claims and damages arising out of his operations.

- 4.4 The Universal Service Provider shall compulsorily offer the USOF **subsidized tariff plan** for rural wireless broadband connections as below:

Tariff Plan	Minimum Speed of the Broadband Connection	Free Download	Rate per MB for extra usage (Rs)	Monthly charges (Rs)	Registration Security, and installation charges (Rs)	Fixed mode CPE rental {for fixed Mode broadband and access} (Rs)	Category to whom applicable
Plan1	512 kbps	500 MB	0.20	99/-	Nil	Nil	All
Plan 2	512 kbps	1GB	0.20	150/-	Nil	Nil	All
Plan 3	512 kbps	5GB	0.20	250/	Nil	Nil	All
Plan 4	512 kbps	10GB	0.20	400/	Nil	Nil	All
Plan 5	512 kbps	Unlimited		800/	Nil	Nil	Govt. Institutions

In addition to the above **USOF subsidized tariff plans**, the USP may also offer other tariff plans subject to the provisions of clause 4.4.3.

- 4.4.1 The Universal Service Provider shall be free to provide wireless broadband connectivity, bundled with different CPEs/Computing devices/ broadband access devices/Software/Applications/Services ensuring the minimum deliverables, as per Agreement. However, no extra subsidy shall be paid over and above that specified in this Agreement.

- 4.4.2** The USP shall not recover any charges towards installation, registration, and security deposit, for the broadband connections, provided under **USOF subsidized tariff plans**, as per clause 4.4.
- 4.4.3** The Universal Service Provider shall not charge tariffs higher than the tariff as per TRAI Orders / Regulations / Directions issued with regard to such service in rural areas from time to time from the customers / users for the service, or the tariff charged by the USP for this type/similar type of service in urban areas, whichever is lower. USP shall submit a self certification to this effect on quarterly basis.
- 4.4.4** The **Tariff Plans**, including the specifications of and charges for CPEs, other than the USOF subsidized tariff plans being offered by the USP(s), for the rural broadband connections provided under this Agreement, shall be submitted to the Administrator USOF for record within a month of signing of the Agreement and subsequent changes made, if any, shall also be reported to the Administrator. In such cases, Administrator, USF may review the subsidy for the period, subsequent to the implementation of the revised tariff.
- 4.4.5** The USP (s) shall retain the revenue generated from the operation of the services.
- 4.5** Subsidy support for fixed CPEs to be procured and owned by the Service Provider and supplied rent free against working USOF Tariff Plan Connections shall be provided at the rate of Rs. 2000/- on net addition basis. This rate shall be reviewed periodically by Administrator, USOF and decision of the Administrator regarding applicable rates shall be final.
- 4.6** The Administrator shall not be responsible or liable for any default of customer/non-payment of EMIs by the subscribers for the wire-less broadband connections provided under the Agreement. The USP shall make necessary arrangements to safeguard its interests in such an event.
- 4.7** The USP shall also arrange to place full details of USOF Subsidy Contributions, Scheme details, status and Grievance redressal and refund mechanism for all the rural wire-less broadband connections, registered/provided under this Agreement, in the public domain. This information should be accessible on its website at the all India/Circle/ SSA level. This information shall be provided in a user friendly manner preferably also in the local language.
- 4.8** During the validity of the Agreement, the Universal Service Provider shall make appropriate arrangement for highlighting in the bills raised to the customer, the USOF subsidy contribution for the connections provided, and the URL of the website where full details are available.
- 4.9** Liability/risk of default/misuse/misappropriation of broadband connectivity provided under the agreement will be the responsibility of the USP.
- 4.10** i) The Universal Service Provider shall give wide publicity to the scheme by way of appropriate marketing tools such as media advertisements, road-shows, banners,

display boards, etc. Further, during the Agreement period, Base Stations/facilities, subsidized by USOF , should carry appropriate display for visibility of the public, that the site has been funded by USOF.

ii) The USP shall provide a signboard of at least 2m x 1.5m at a height of 10m above ground/base of the tower indicating on it the name of the village, date of installation, and name of the USP and that the Wireless Broadband Network has been supported by the USOF , Department of Telecommunications, Govt. of India. The USOF logo and URL, as per clause 4.6, should be displayed on the board.

4.11 The Universal Service Provider shall provide single window interface to the customer for all pre as well as post connection activities such as booking, provisioning and handling the complaint.

4.12 The Universal Service Provider shall be solely responsible for and shall provide all the necessary installation and after sales services for the customer premises equipment (CPEs)/Dongles, etc. **and any other computer/computing devices, if provided, to the satisfaction of the customer.**

4.13 The Universal Service Provider shall continue to provide the broadband connections as per the USOF Subsidized Tariff Plans during the currency of the Agreement, notwithstanding any closure on account of disconnections, surrenders and shifts

4.14 The Universal Service Provider shall make arrangement to affix the “USOF SUBSIDIZED” on the subsidized fixed mode CPEs provided to the subscribers under the Agreement.

4.15 The Administrator, USOF may call for **SDCA/Base station-wise** list of all **the registered** customers with the USP for broadband connections, which should be provided from the effective date of the Agreement, within the Service Area for which the Agreement is signed as per the **Annexure I**. Separate lists shall be maintained for Government institutes and individual users. The registration slips/receipts given for broadband connections shall have the URL of the website where status/details should be available.

4.16 The Administrator, USOF may call for Master database of broadband connections, provided under the Agreement, as per **Annex --**.

4.17 The Administrator shall have the right to increase or decrease, up to 10% of the villages to be covered with BB facility under the agreement, as specified in **Annexure-I and the enclosed CD**, without any change, in the Representative Rates on the same terms and conditions of this Agreement.

4.18 INSPECTION AND TESTS

4.18.1 The Administrator or his representative or the agencies authorized (here-in-after called the Designated Monitoring Agency or DMA) shall have the right to inspect and test the created infrastructure for provision of deliverables and broadband service, as per prescribed test schedules, for their conformity to the specifications. Wherever the Administrator decides to conduct such tests (e.g. on the base station sites or on the premises of Universal Service Provider(s) created by them, and/or end

users' locations i.e. roads /villages/remote locations, etc), all reasonable facilities and assistance like Testing instruments and other test gadgets including access to drawings and other details shall be furnished to the Designated Monitoring Agencies at no charge to the Administrator.

- 4.18.2** Should any inspected or tested components fail to conform to the specifications, the Administrator may reject them and the USP(s) shall either replace the rejected components or make all alterations necessary to meet the specifications/requirements free of cost to the Administrator.
- 4.18.3** If any equipment or any part thereof is found defective or fails to fulfill the requirements of the Agreement, the designated monitoring agencies shall give notice to the USP(s) setting forth details of such defects or failure and the USP(s) shall make at their own cost the defective equipment good, or alter the same to make it comply with the requirements of the Agreement forthwith and in any case within a period not exceeding one month of the initial report. These replacements shall be made by the USP(s) free of all charges at site.
- 4.18.4** Nothing in this Clause shall in any way release the USP(s) from any warranty or other obligations under this contract.

4.19 CHANGES IN AGREEMENT SIGNED

The Administrator may, at any time, by a written order given to the USP(s), make changes within the general scope of the Agreement in any one or more of the following subject to the condition that such changes will not have any major financial implications:

- (a) designs or specifications of the scheme
- (b) Number & name of villages to be covered and thereby the number of the Base stations, Backhaul equipment;
- (c) The services to be provided by the USP.

4.20 DURATION OF AGREEMENT

The Agreement shall be valid for a period of **eight years** from the effective date unless revoked earlier for reasons as specified elsewhere in the document.

4.21 EXTENSION OF AGREEMENT

The Administrator may extend, if deemed expedient, the validity of Agreement for such period and on such terms as may be mutually agreed which shall be reviewed during the seventh year of the Agreement. The decision of the Administrator shall be final in this regard. On expiry of the Agreement period, the responsibility of operation & maintenance of the created infrastructure for provision of broadband services shall lie on the owner operator.

4.22 MODIFICATIONS IN THE TERMS AND CONDITIONS OF AGREEMENT

The Administrator reserves the right to modify at any time the terms and conditions of the Agreement, if in the opinion of the Administrator, it is necessary or expedient to do so in public interest or in the interest of the security of the State or for the proper conduct of the service. The decision of the Administrator shall be final in this regard.

4.23 REQUIREMENT TO FURNISH INFORMATION

The Universal Service Provider(s) shall furnish to the Administrator, on demand, such documents, accounts, estimates, returns, reports or any other information as may be called for by the Administrator pertaining to this tender, including the setting up of the wireless broadband network for provisioning of wireless broadband services, under the scheme. The USP(s) shall also submit information to TRAI as per any order or direction or regulation issued from time to time under the provisions of TRAI Act, 1997, as amended, modified or replaced from time to time.

4.24 TERMINATION OF AGREEMENT

4.24.1 The Administrator may, without prejudice to any other remedy available for the breach of any conditions of the Agreement, by a written notice of 90 calendar days issued to the USP at its registered office, terminate the Agreement under any of the following circumstances:

- a) Failure to perform any obligation(s) under the Agreement;
- b) Failing to rectify, within the time prescribed, any defect as may be pointed out by the Administrator.

4.24.2 The Agreement shall stand terminated forthwith in case the USP goes into liquidation or is ordered to be wound up.

4.24.3 Provided that if the respective CMTS/ UASL/ISP license and/or WPC frequency assignment/wireless operating license/permission for operation in the unlicensed band, as applicable & as the case may be, is/are terminated, then the Agreement between USOF and USP(s) under this scheme shall also stand terminated forth-with.

4.24.4 Wherever considered appropriate, the Administrator may conduct an inquiry to determine whether there has been any breach in compliance with the terms and conditions of the Agreement by the USP and upon such inquiry the USP shall extend all reasonable facilities and shall endeavor to remove the hindrance of every type.

4.24.5 It shall be the responsibility of the USP to maintain the Quality of Service, as per conditions of the Agreement during the period of notice for termination of the Agreement; otherwise this shall be a cause for invocation and forfeiture of PBG.

4.25 ACTIONS PURSUANT TO TERMINATION OF AGREEMENT

4.25.1 Wherever the Agreement is terminated prematurely, the Administrator may, at his sole discretion, enter into an Agreement with another USP(s) for providing the Wireless Broadband Service, who will be paid subsidy at the Representative Rate determined under the Agreement based on this tender.

4.25.2 If the QoS had not been maintained as per standard prescribed hereto during the notice period then no subsidy for the notice period shall be payable.

4.25.3 In case of termination of the Agreement before the expiry period, the prescribed PBG will be encashed and forfeited. Additionally, if it is found that the USP(s) had received any payment in excess of the amounts under the Agreement prior to termination, then such amount shall be paid back immediately on demand by the USP(s) to the Administrator.

4.26 INDEMNITY

The USP(s) shall indemnify the Administrator in respect of any damages, claims, loss or action against Administrator for acts of commission or omission on the part of the USP(s), its agents or servants.

4.27 DISPUTES SETTLEMENT

4.27.1 In the event of any question, dispute or difference arising under the Agreement, or in connection thereof, except as to the matter, the decision of which is specifically provided elsewhere under the Agreement, the same shall be referred to an Arbitral Tribunal, hereinafter called the “TRIBUNAL” consisting of sole Arbitrator to be appointed by the Secretary, Department of Telecommunications, Ministry of Communication & IT, Government of India.

4.27.2 The Arbitration proceedings shall be conducted in accordance with the provisions of Arbitration and Conciliation Act 1996 as amended or replaced from time to time. The governing law shall be laws of India.

4.28 FORCE- MAJEURE

4.28.1 If at any time, during the continuance of the Agreements, the performance in whole or in part, by either party, of any obligation under this is prevented or delayed, by reason of war, or hostility, acts of the public enemy, civic commotion, sabotage, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts [not limited to the establishments or facilities of the USP(s)], fire, floods, natural calamities or any act of GOD (hereinafter referred to as EVENT), provided notice of happenings of any such EVENT is given by the affected party to the other, within 10 Calendar days from the date of occurrence thereof, neither party shall, by reason of such event, be entitled to terminate the Agreement, nor shall either party have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided wireless broadband services under the Agreement shall be resumed as soon as practicable, after such EVENT comes to an end or ceases to exist.

4.28.2 The decision of the Administrator as to whether the service may be so resumed (and the time frame within which the service may be resumed) or not, shall be final, binding and conclusive.

4.29 SET OFF CLAUSE

4.29.1 In the event any sum of money or claim becomes recoverable from or payable by the USP(s) to the Administrator either against the Agreement or otherwise in any manner, such money or claim can be (without restricting any right of set off for counter claim given or employed by law) deducted or adjusted against any amount or sum of money then due or which at any time thereafter may become due to the USP(s) under this Agreement or any other Agreement or Contract between the Administrator and the USP(s).

4.29.2 The aforesaid sum of money payable by the USP(s) shall include any valuable security that can be converted into money.

4.29.3 After exercising the right of set off, a notice shall always be given immediately by the Administrator to the USP(s).

4.30 OTHER OBLIGATIONS

4.30.1 The USP(s) shall be bound by the terms and conditions of the Agreement as well as by such orders/directions/regulations of DoT/ TRAI as per provisions of the TRAI Act, 1997 as amended from time to time and instructions as are issued by the Administrator.

4.30.2 The provisions made under Indian Telegraph Act 1885, or Indian Wireless Telegraphy Act, 1933 as amended or replaced from time to time, or any order passed under these statutes, so far applicable, shall be binding on the USP(s).

SECTION -V

TECHNICAL CONDITIONS

- 5.1** The Universal Service Provider shall work within the framework of the Technical conditions of the respective licence, i.e. CMTS (Cellular Mobile Telephone Services)/ UASL (Unified Access Service Licensees)/ Internet Service Provider Category (A or B) based on the ISP guidelines 24.8.2007, as applicable as well as WPC frequency assignment/wireless operating license (or terms and conditions of operation in the unlicensed frequency bands as prescribed by the WPC), in the entire subject service area for provisioning of the said wireless broadband services.
- 5.2** The Technical requirements of the scheme described in this section (Section-V) shall supplement “**General Conditions**” as contained in **Section: III** and “**Commercial Conditions**” as contained in **Section: IV** of this tender document, as applicable.
- 5.3** The bidders shall ensure that do not make any claims which are technically unsustainable.
- 5.4 DETAILS OF THE SCHEME**
- 5.4.1** The technical specifications of the scheme for support for setting up and management of wireless broadband network and provision of **terrestrial** wireless broadband services to the specified rural and remote areas of the country are explained in the forthcoming clauses. The USP shall build the wireless broadband infrastructure by leveraging the existing infrastructure created for telephony in rural and remote areas. **The Scheme envisages a technology neutral approach for a suitable network solution, to be provided by the bidder, as per the bidder’s choice to meet the deliverables of the scheme.**
- 5.4.2** A generic wireless broadband solution will comprise of Access Network, Backhaul and Core Network as enumerated below:.
- i. **Access Network** :Wireless Base Stations along with associated equipment, providing last mile connectivity to the subscribers/end users (i.e. from subscribers/end users to Wireless Base Stations)
 - ii. **Core Network:** Beyond **Access Network**, all elements of the network, except for **Backhaul** portion, are collectively termed as **Core Network**.
 - iii. **Backhaul:** The **Access Network** is connected to the **Core Network** through **Backhaul**.

Considering the afore-said approach, the envisaged network architecture for scheme implementation is taken as follows for reference, though the USPs are free to design the network as per solutions of their choice capable of meeting the objectives, deliverables and other requirements of the scheme in totality.

- 5.4.3** Though the Outline of the scheme is provided at clause 1.4.2 in Section:I, the following salient features are detailed below as they have special reference to the technical conditions:

- i) **Target Villages:** Unless otherwise specified, all the inhabited Villages in rural areas (as per Census 2001), except for the villages not covered with mobile voice telephony services, are to be broadband (BB) enabled through this scheme. The Service Area-wise lists of the villages, to be covered under this scheme, are placed at **Annex –I**, and the names of the villages to be covered are provided in the enclosed CD as well as posted on the USOF Website.
- ii) **Setting up of the Network and Provision of Services:** The Universal Service Providers (USPs) shall be required to set up and manage the wireless broadband network for provision of **terrestrial** wireless broadband services, including the following:
- a. Terrestrial Wireless Broadband Base Stations along with associated antennas, Battery, Power Plant, Engine Alternator, etc. as specified in the Tender Document
 - b. Broadband Base Stations to have a minimum peak capacity/throughput of 10 Mbps /sector in order to enable broadband proliferation in rural areas. Suitable number of such sectors shall be installed at each Base Station to cover the specified areas in a seamless manner.
 - c. Backhaul equipment shall be of minimum 34Mbps (or equivalent) capacity with all associated elements/antennas, as specified in the Tender Document

Further, the USP(s) shall be responsible for installing all necessary equipment, including the above, required for meeting the objectives, deliverables and other requirements of the scheme, for provision of wireless broadband services, inter-alia, all aspects of provision, operation, maintenance and management of Wireless Broadband Services as per the terms and conditions of the Service License, TRAI, Tender Document, etc. For this purpose. The solution should incorporate appropriate Network Management System to meet various security, QoS, requirements and for delivering and management of services. The management system should be such that it should provide access to monitor number of active customers and provide capability to audit the network.

iii. Coverage objectives

The scheme shall follow a “*ubiquitous* coverage” approach (i.e. complete coverage of the target areas in a seamless manner and not spot coverage) for setting up the wireless broadband network in the specified rural and remote areas for broadband enabling (*in fixed, nomadic and mobile modes*). The broadband services, as per prescribed specifications, shall be available in the entire specified area, including in streets, fields, roads, highways, along with indoor coverage in residential areas/institutions, etc., as applicable. The wireless broadband coverage of all the specified rural and remote areas, under this scheme, shall be with minimum 90% probability of coverage and the same shall be strictly followed while designing/planning the wireless broadband network.

iv. Deliverables

The deployed wireless broadband network shall provide the wireless broadband services on demand, meeting the following deliverables, with “**contention ratio**” of 1:20 or better:

- Seamless coverage of all target villages
- **Speed** :Broadband speed in fixed/nomadic mode will be 512 kbps or above, upgradable to 2 Mbps.
- **Nomadcity**: It shall be able to support a minimum speed of 512 kbps or above, upgradable to 2 Mbps on demand, to each user, in nomadic mode.
- **Mobility** - Broadband speed in mobile condition will be up to 512 kbps, upgradable to 2 Mbps, at a vehicular speed of at least 30 km/hour,.
- **Roaming**- The solution shall support wireless access to roaming subscribers/clients.

5.5 BROAD NETWORK REQUIREMENTS

The USP (s) shall select the best appropriate digital technology, compliant with relevant ITU/IEEE/IETF/IEC/TEC or any other International standardization bodies, permitted under the respective DoT License , as applicable, to meet the deliverables of the scheme. In no case, the technology used should be a proprietary one.

All equipment/CPE, to be deployed in the network, shall be certified/evaluated against the respective Standards and specifications, as indicated above in the clause, from any of the following bodies::

- i) An accredited organization (details of accreditation to be submitted), or
- ii) Govt.of India (GoI) organization (such as TEC), or GoI’s autonomous body/society/subsidiary, etc. (relevant details to be submitted).

The Administrator, USOF or the Designated Monitoring Agency (DMA), appointed by him, may call for such documentary evidence for ensuring compliance with the prescribed standards, as applicable

The network elements for **core network** shall have availability of at least 99.995% measured over a period of one year and accordingly each network element forming part of the system shall have much improved fault tolerance and higher reliability as called for elsewhere in this document. The **backhaul** shall have at least 99.99% availability whereas the **access network** shall have at least 98% average percentage availability measured over a period of one quarter.

The USP(s) will keep a record of all the installed equipment like Base Stations, Backhaul equipment, Core broadband network, OF cable and other related items of the network such as Battery, Power Plant, Engine Alternator, etc.,. The USP(s) shall also maintain faults and rectification reports of the Base Stations, Backhaul equipment, OF cable and other related items of the network such as Battery, Power Plant, Engine Alternator in respect of the running of the services, which will be produced before the Administrator or TRAI, as and when and in whatever form desired.

It shall be possible to upgrade the deployed system/network elements to the future revisions/versions of the deployed technology. Further, the deployed system/network elements shall be fully backward compatible with the existing revisions/versions of the deployed technology. In case of any difficulty in meeting the above, the USP(s) shall take suitable measures, including installation of add on hardware and/or software for meeting the aforesaid requirements. This shall ensure smooth technology migration & seamless network connectivity.

The supplies/converters for the equipment (except computer system supplied as part of EMS/NMS and other AC powered equipment, if any, shall use 230 V AC with variation of -15% to +10% at 50Hz \pm 2Hz) provided under this scheme, shall NORMALLY use -48V DC uninterrupted primary source power. The power supply may vary normally within the voltage range -40 to -60 V DC and the supplied equipment shall operate satisfactorily within this range.

All the network elements, wherever required, shall have suitable standard synchronization arrangements, so that common time and frequency references can be distributed to all the nodes of a network in order to align their time/frequency scales. Synchronization may be achieved through suitable means such as by Installing a GPS at each site, Synchronization over IP, or any other reliable arrangement.

Each of the network elements shall be supplied with the required Element Management System (EMS) conforming to TEC standard *SD/NMS-02/01 FEB 2005 or equivalent ITU/IEEE/ IETF/IEC standards*, as applicable.

The selected network solution shall support IPv4 addressing and routing with up-gradability to IPv6. The roadmap for support of IPv6 may be specified by the USP(s). However, the network shall support the applications and terminals using IPv6.

The desired technical specifications of the deployed technology and network, for meeting the respective features and performance, such as coverage, broadband speed & throughput, mobility and roaming facility, AC & DC power supply, power plant, battery back up and Engine Alternator, Element Management System for monitoring and provisioning, are given in this Section: V for purpose of *guidance* of the USP(s).

The selected network solution should inter-operable and capable to interface with existing wireless/wireline networks to facilitate bidirectional exchange of data traffic, or as the case may be, with various data rates and formats and/or protocols from source to destination location as per the requirement and demand of this scheme.

5.6 RESPONSIBILITY OF THE UNIVERSAL SERVICE PROVIDER (USP)

The USP(s) shall offer the most suitable technology and the responsibility to make the network work, as prescribed in this tender document, shall be that of the bidder(s). For this purpose, necessary addition and/or replacement and/or modification of hardware/software/equipment/modules will be carried out by the USPs, both before and after network commissioning.

Description of the solution offered:

The description of the proposed solution will indicate the salient features of the approach and philosophy adopted to achieve the deliverables of the scheme. It shall clearly explain, inter-alia, as to how the objectives, deliverables and other requirements of the scheme shall be met by the bidder through the offered solution within the stipulated time frame.

The Bidder shall also include the technical details of the technology, based on any international standard, offered for deployment for meeting the scheme' requirements. The above technical description shall highlighting the benefits and also the inherent constraints, the evolution path, suitability to meet the requirements of this scheme presently and in future, current deployment in terms of number of systems around the world and user experiences, vendors (manufacturer) support and various other aspects including the following:

1. Description of Network architecture as part of solution to cover specified villages

- I. District-wise No. of base station nodes proposed for meeting objectives and deliverables in a bidding unit
- II. Technology proposed to be employed
- III. MHz spectrum employed to meet deliverables of scheme as applicable to proposed architectural
- IV. EIRP per carrier

2 Approach to aggregation of traffic for base stations nodes

- I. Backhaul capacity per base station nodes planned

It is expected that further transportation network from first level of aggregation onwards towards core network will be properly engineered for implementation of the scheme and subsequently augmented from time to time as per traffic requirements. The above aspects shall be taken into account during designing of the network.

3 Duplexing approach : FDD/TDD**FDD**

- II. Uplink side / carrier bandwidth
- III. Down link side/ carrier bandwidth
- IV. Peak throughput of carrier

TDD

- I. Carrier Bandwidth
- II. Peak throughput of carrier

Broad approach to planning of wireless broadband solution

Provide illustrative link, Budget engg. for and RF planning philosophy.

4 Approach to core network of proposed solution

Description of broad philosophy of core employed along with access network and part of solution and illustrate how it can meet deliverables.

Network management philosophy:

I please indicate the broad approach and features of proposed network management aspect of solution.

Security/ IPV₆ road map:

I please furnish broad road map for security and IPV₆ as part of solution to meet deliverables.

Approach to achieve seamless coverage

Pl. give broad approach and philosophy

Coverage of villages in the Licenses area

Coverage Range of each base station node employed for various terrains

Broad description of approach to seamless coverage

- i. Whether coverage deliverables of village/ District/ licenses area complied
- ii. Pl. describe the approach to hand-off and roaming support to meet the deliverables.

Capacity

- i. Peak throughput of RF Carrier. Mechanism employed to distribute / share the peak capacity amongst users.

No. of users created per base station node

- i. @512 kbps @ contention ratio of 1:20.
- ii. Arrangement to meet 2 Mbps on demand
- iii. No. of such 2 Mbps users supported in the capacity proposed to be deployed at the contention ratio of 1:20 and for given QoS.

Standards based approach

- i. List of standards (No., name and year) employed by the proposed solution to achieve deliverable and confirmation that no non-standard technology is proposed for network solution
- ii. Scalability of network - Approach used to achieve scalability of network proposed
- iii. Interoperability of the solution with other network: Please comment on the same description time line programme for installation and completion of scheme

QoS :

Description of QoS mechanism proposed to be deployed as part of solution as enunciated in the tender to meet deliverables.

PHY/MAC standards, as applicable employed in the broadband solution.

Any other information, relevant to the scheme, but not covered in above description, may be called for by the Administration as and when required. Further, bidders are may also furnish any other information which has bearing on the viability of the solution to meet the deliverables

Necessary diagrams where applicable can be enclosed as answer to the checklist

The USP(s) shall bring to the prior notice of Administrator USOF, any deviation in meeting any of the deliverables and specifications, as prescribed in the **SECTION:5 TECHNICAL CONDITIONS** .

The **Description of the technology offered** (as indicated above in this Clause), furnished by the USP, shall, inter-alia, also form an integral part of the Agreement, to be signed between the Administrator, USP.

5.7 Detailed Site Survey

The USP(s), immediately after award of the tender, shall undertake detailed survey of the specified target rural and remote areas , to be covered under this scheme, for provisioning of wireless broadband services. This, inter-alia, shall include site survey of all the proposed sites to assess the provision for land / building / shelter / space requirements, Towers, topography of the specified areas, network coverage, AC Grid supply, Power Supply Back-up, Base Stations, Backhaul equipment, other systems/elements and all other aspects required for complete site and network engineering for provision of the prescribed services under the scheme.

The Administrator USOF will be kept informed of the survey and the results obtained as also the engineering plans developed accordingly for each Districts of Service Areas, covered under this scheme.

The USP(s) shall furnish the firm Plan of the terrestrial wireless broadband coverage along with District-wise No. of the proposed Base Stations and their locations within 4-months of signing of the Agreement. *Further, if there is any change to the Description of the technology offered (as indicated above in Clause No 5.6, the same shall also be furnished by the USP(s) for approval from the Administrator, USOF.*

- 5.8** The USP(s) shall obtain all necessary statutory clearances, including SACFA/WPC clearance, Frequency assignment, Right of Way (RoW) clearance, ***DGCA clearance, clearance from the Home Ministry for the equipment for security reasons***, custom clearance, excise, octroi clearances, environmental clearances, etc. from central/state/local authorities, regulatory bodies, statutory bodies of the central/state Government, municipality, highway authority, electrical utilities, forest department, gas authorities, pollution board for clearance for DG set operation and any environmental clearances, and any other clearances, if required.

Further, The Universal Service Provider(s) shall abide by the prevalent laws of the land, labour laws, local customs and the best prevalent latest practices in the Industry. The Administrator, USOF shall not be responsible for any breach of such Act(s)/ Law(s) by the Universal Service Provider(s) for whatsoever may be the reason.

5.9 QUALITY OF SERVICE PARAMETERS

- 5.9.1** The Quality of Service Parameters (QOS), as prescribed by TRAI, shall be applicable.

The USP(s) shall ensure provision of reliable broadband services as per the Quality of Service (QoS) prescribed by the TRAI from time to time. The USP(s) shall adhere to such QoS standards and provide timely information as required therein.

The Administrator or TRAI may carry out performance tests either directly themselves or through Designated Monitoring Agency and also evaluate the QoS parameters at any time during the tenure of the Agreement. The USP(s) shall provide ingress and other support, including documents, instruments, equipment etc. for carrying out such performance tests and evaluation of Quality of Service parameters. QoS shall be such that it would support a variety of services & applications of different nature.

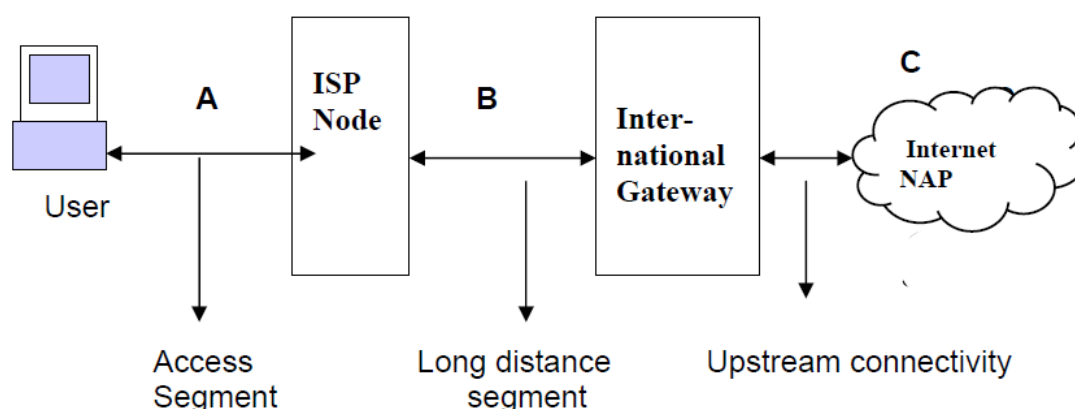
5.9.2 The Quality of Service Parameters (QOS) for Wireless Broadband Services are yet to be released by TRAI, and till such times, the following provisional values will be used for evaluation. After the TRAI issues the QoS for Wireless Broadband Services, the same shall be applicable with immediate effect:

Sl	Parameters	Limit	Averaged over a period of
i.	Service Availability/Uptime (for all users)	>98%	One Quarter
ii.	Packet Loss	<1%	One month
iii.	Network Latency <ul style="list-style-type: none"> • User reference point at POP/ISP Gateway Node to international Gateway [International Gateway Service Provider(IGSP) /National Internet Exchange of India(NIXI)] • User reference point at ISP Gateway Node to international nearest NAP port abroad (Terrestrial) • User reference point at ISP Gateway Node to international 	<ul style="list-style-type: none"> <120 msec <350 msec <800 msec 	One month

	nearest NAP port abroad (Satellite)	
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The terms used above have the following meaning:

- ‘IGSP’ means International Gateway Service Provider for Internet services.
- ‘ISP’ means Internet Service Provider licensed to provide access to Internet Service.
- ‘ISP Node’ means a location where the ISP’s Gateway Router is connected with upstream service provider.
- ‘NAP’ means Network Access Point. It is a major overseas Internet interconnection point that serves to logically link global Internet.
- NIXI’ means National Internet Exchange of India
- ‘POP’ means Point of Presence of the service provider intending to provide Broadband services where multiple such individual Broadband connections are aggregated and the subscriber is able to access interactive services including the Internet through this POP.



5.9.3 The USP(s) shall be responsive to the complaints lodged by the customers. They shall rectify the deficiencies and maintain the history sheets for each installation, statistics and analysis on the overall maintenance status.

Proper arrangement should be made by the USP(s) for reporting/ booking service related complaints.

5.10 DETAILS OF THE COMPONENTS TO BE CREATED UNDER THE SCHEME

5.10.1 For provisioning of Wireless Broadband Service under this scheme, the following Non-shareable Components and Shareable Components are envisaged to be provided for **Setting up of the Wireless Broadband Network:**

A. Non-shareable Components

- (i) Base Station equipment or equivalent, along with associated antennas, accessories, etc, **and any or all such equipment, as subsidized by USOF, shall in no case be shared with any other TSP/USP or any other agency, at least during the currency of the Agreement period of this scheme.**

B. Shareable Components

- i) Core broadband equipment, Backhaul connectivity
- ii) Power back up, like power plant, Batteries, Engine Alternator

However, the USP (s) shall ensure that the ***Shareable Components shall be suitably designed, dimensioned and equipped for adequate capacity and capability, so that they shall meet the objectives, deliverables and other requirements of the scheme, even after their sharing, and such sharing shall not adversely affect the QoS of the network & the services under this scheme.***

5.10.2 The USP shall be required to arrange hoisting of antennas on towers of suitable height , along with electrical connection and equipment room, wherever required ***The minimum lease period for the tower (if on lease) should be at least upto the validity period of the Agreement .***

5.10.3 USP(s) are required to build, maintain, operate, and manage the wireless broadband network created for the provision of Wireless Broadband Services as per **Section-V: Technical Conditions**. The network so set up shall be owned by the USP(s).

5.11 SECURITY CONDITIONS

The terms and conditions of the DoT License Agreement, as the case may be, shall be binding *mutatis mutandi, including the conditions contained at Annex IV-I.*

5.12 BRIEF DETAILS OF THE NETWORK ELEMENTS

5.12.1 TOWERS

The antennas, for the coverage of villages, are to be installed on the towers of suitable height as per the network design of the USPs, depending on the technical requirements. The towers should comply with the central/state Govt./Local bodies/TRAI/DoT statutory norms/rules/guidelines as applicable, inter-alia, DoT guidelines titled “Guidelines on Disaster Resistant Telecom Buildings and Towers – With special Reference to Earth-Quake & Cyclone(September 2005), issued vide DoT File No. 800-4/2001-VAS dated 24. 10. 2005.

The towers should have all the required clearances as per prevailing Provisions/laws/rules, including SACFA, clearances from the Central Govt. (such as clearance from DGCA)/ State Govt./Local authorities/, etc.

5.12.2 Wireless Broadband Base stations

The Wireless Broadband Base Stations shall support at least Video, Data and mobility to provide last mile connectivity to Fixed, nomadic and mobile services. The mobility shall be as per prevailing regulatory and licensing conditions. It shall be able to support the following end user services / applications:

- Last mile Broadband Wireless Access

- Access to public Internet
- Roaming

The Wireless Broadband Base stations, based on any standard based technology, shall be deployed in rural areas for providing wireless broadband services to the users located within their foot-print. The Base Stations shall be in charge of radio transmission and reception in one or more cells and shall provide the air interface to the Mobile Station (MS)/Customer Premises Equipment of the subscriber. The Base Stations shall be capable to support multiple users to enable efficient and fair use of resources. They shall provide seamless coverage and to create minimum peak capacity/throughput of 10 Mbps /sector to serve the customers with the speeds and other requirements as mentioned under “**Deliverables**” and elsewhere in this tender document, in order to enable broadband proliferation in rural areas.

The Base Stations, to be set up under the scheme, shall be located only in rural areas, and shall be used for providing broadband service to rural areas only. The operation of equipment shall be in the frequency band of the deployed technology with the respective channelization plan, as per allocation by WPC/ DoT. No external components, like filters etc., to conform the equipment to operate in the specified frequency band(s) shall be permitted. The radio equipment shall be fully contained inside the cabinet and the antenna port shall be available directly from the equipment inside.

Each Base Station should have capability to support typically up to six sectors and it will be possible to configure any **Base station** to operate in a 2-sector mode to provide coverage along highways and railways. Each Base Station shall be identified within the network by a unique ID. Further, each cell shall be taken as a specific radio coverage area and identified by a unique Cell ID, which shall be broadcast across the entire cell area.

It will be possible to limit mobility/service of the subscriber within a sector, within a Base Station, within a group of specified Base Station, within an SDCA or in any other area in the network, as per the requirement specified by the USOF/DOT/TRAI, etc., as applicable.

Some of the salient features of the **Base stations** are listed below for guidance:

i) Scalability: Technologically, the equipment will have scaleable capacity, compatible and flexibility so as to support the future high throughput/speed requirement and service needs. It shall have the capability of being modularly equipped with suitable configurations on multiple sectors at single location.

ii) Configurability: It will be possible to configure and deploy the equipment with higher number of carriers/codes per sector, subject to technical feasibility, to cater to the requirement of higher number of subscribers, both in terms of more capacity & more number of simultaneous users, depending on the demand and spectrum availability.

iii) Upgradability: The equipment will be upgradable to higher revisions/versions so as to take advantages of new technological features through add-on hardware and/or software.

iv) Modularity: The architecture of the Base Station will be modular in order to provide different configurations to enable maximum flexibility for capacity expansion and replacement of faulty modules/ cards.

v) The Base Stations will be preferably of **Outdoor versions**. The Outdoor Wireless Base Station shall be suitable for operation without air-conditioning and without shelter, thereby reducing power consumption.

The Outdoor Base Stations & power supply cabinets will be installed in suitable cabinets/enclosures for protection, such as grilled enclosure. The roof of grilled enclosure shall be of translucent fiber sheet with sufficient strength. The grilled enclosure shall have a gate & locking arrangement. All outdoor cabinets/ enclosures shall be compliant with IP55 standard.

vi) In case a USP installs an Indoor Base Station, all necessary requirements of space, shelter, prefab shelter, Air conditioners, additional AC mains load and additional power backup shall be provided by him at his own cost.

vii) The Base Station will work with nominal input voltage of -48V DC. The option of Base Station working with 230V AC will also available. The detail of power supply arrangement along with backup battery arrangement is to be furnished.

The Base Station will have automatic shutdown features with programmable automatic timer to increase the battery backup time for a given capacity of battery.

viii) The BS will be able to indicate failure of any of its receive or transmit antennas/ antenna elements and failure/degradation of Base Station-Antenna Link through alarms and/or parameters.

ix) It will be possible to connect a local maintenance terminal to base station for maintenance and diagnostic purposes.

x) Frequency Re-Use : The system will support suitable frequency re-use patterns as per requirement of the deployed technology for optimal utilization of spectrum.

xi) The system will support handover. The handover may be initiated by the network based on RF criteria as measured by the Mobile Station (MS), or the Network (signal level, Connection quality, power level, propagation delay) as well as traffic criteria (e.g. current traffic loading per cell, interference levels, maintenance requests, etc.), or through some other suitable mechanism/criteria.

xii) The Base Station will be equipped with suitable interfaces such as E1, STM, IP, etc., for backhauling purpose.

5.12.3 Antenna System for Base Stations

The Antenna system to consist of the following:

- (i) Antenna.
- (ii) RF Cables

- The antennas to be supplied will generally conform to TEC Specifications (GR No.GR/ANT-20/02. NOV 2005/ its latest version or suitable international standards.
- The antennas to be supplied shall operate in the frequency bands of the technology under deployment.
- The lightning protection unit shall be equipped with devices suitable enough to handle worst hazards caused by the lightning and ensure safety of the entire installation.
- The base station will be capable to support other types of antenna configurations as per requirement.

The bidders are required to ensure that antennas and towers are robust and reliable enough to withstand wind speed , environmental conditions to provide uninterrupted service,

5.12.4 BACKHAUL

Suitable Backhaul Connectivity should be provided to the Wireless Base Station on Microwave or Optical Fibre or Satellite or on any other digital technology for transporting its aggregate traffic to the core network.

- The Backhaul system shall be required for connecting Base Station to the core network. The transmission equipment shall conform to the relevant TEC specifications or suitable international standards.

- The backhaul system to be of minimum 34Mbps (or equivalent) capacity, and be equipped with suitable add/drop facility
The backhaul equipment installed will preferably work without the need for Air-conditioning.

It shall be the responsibility of the Universal Service Provider to ensure that all necessary components and subsystems including the access backhaul systems are properly integrated & compatible for operation of the network.

5.12.4 CORE BROADBAND NETWORK

For the purpose of this tender, all elements of the network beyond the **Access Network**, except for **Backhaul** portion, are collectively termed as **Core Network**.

The Core Broadband Network will provide connectivity to the Internet, other public networks and corporate networks. This will typically include backbone transmission equipment, servers/routers (such as AAA servers that support authentication for the devices, users, and specific services, and will provide per user policy management of QoS and security). The Core Broadband Network, in general, will also be responsible for IP address management, support for location management, mobility and roaming between networks. Further, it will also provide gateways and interworking with other networks, The core network, inter-alia, shall support the following:

- i) It shall support the automatic mechanism to secure service continuity in the offered end user services
- ii) It shall summarize the information that are lost (subscriber/context data, lost packets) or need to be renewed in the process mentioned above.
- iii) It shall have a capability for packet service processing.
- iv) It shall support IP transmission and the robustness of the network.
- v) It shall support that user authentication can be performed at the corporate or isp network and should be independent of the mobile (SIM card) used.
- vi) It shall support that IP address allocation can be done under the control of the corporate request without manually re-configuring.
- vii) It shall support user IP addresses , accounting on or off messages
- viii) It shall support accounting messages; and profiling of the user. The authentication and accounting information exchange shall be able to use independent of IP address allocation methods.
- ix) The accounting messages shall support billing co-ordination between different operators and networks.
- x) The user information shall, through the AAA server, for example, be forwarded to a number of destinations such as the operator's service network, third party service providers.
- xi) Different possibilities shall be provided with regards to selecting alternative AAA server in the event of failure, the primary one improves the redundancy handling towards the AAA servers.
- xii) It shall have processors in active/standby mode or load-sharing mode to improve its reliability.
- xiii) It shall support different Quality of Services such as :
 - Support QoS of Conversational Class such as speech and videophone (if the network supports them).
 - Support QoS of Streaming Class such as multimedia service.
 - Support QoS of Interactive Class such as Web Browser and location-based service.
 - Support QoS of Background Class such as E-mail receiving program.
- xiv) It shall provide integrity protection for signalling and supports encryption to signalling and service to maintain the security of user communication.

xv) It shall support suitable location methods such as cell ID based, GPS based.

5.12.5 TELECOMMUNICATION MANAGEMENT NETWORK SYSTEM (TMN) AND SUPPORT SYSTEM

The Telecommunication Management Network system (TMN) also referred to as Element Management System (EMS) shall manage the Network by an integrated and open standard interface so that it can interconnect with other vendor's systems also.

The Architecture shall be based on TEC/ITU M.3010 standard or as per any other international standard as applicable. It should have along with Element Management System (EMS), local craft terminal/client terminals/work stations, as applicable.The TMN/EMS shall provide the capability to monitor, configure, re-configure and control the elements of the telecommunication network from a centralized location and also at each node of the network where equipment is located using portable devices (e.g. laptops). It shall, inter-alia, provide all FCAPS functionality and web based management capabilities for the supplied solution, including:

- Fault management
- Configuration management
- Accounting management
- Performance monitoring
- Security management

The EMS shall have open North bound interfaces such as ITU Q3, TMF-CORBA, SNMP etc and shall be capable of integration with other standards based NMS systems. The EMS shall use Open APIs and standard interfaces. The interfaces towards/ from Network elements may be SNMP ver2 or better. The following details typically pertain to the EMS and Support Center from where the network is managed

I. Configuration management

Menu-driven hierarchy based operations on the Network elements through all necessary commands or operations to configure network components shall be provided. The following functions of a configuration management system shall be supported:

A. Planning and provisioning

- i) It shall be possible to perform Planning and Provisioning related functions remotely.
- ii) Configuration changes shall be logged, and configuration data shall be backed up for prompt restoration of network elements.
- iii) The configuration management system shall protect the system from improper configuration that would disrupt normal service, and shall maintain data consistency across network elements.

- iv) Configuration change shall, as much as possible, be completed without element reboot.
- v) Provisioning for currently unused or unequipped slots/units shall be allowed for the purpose of engineering planning.
- vi) Plug-and-play startup
- vii) System shall provide a safe and efficient way of verifying the consistency of parameter settings in the radio and transport network

viii) End user configuration and provisioning management: It shall be possible to create, configure, provision and manage end users with differentiated QOS requirements based on per user bandwidth allocation etc. It shall be also possible to support QOS based service classes for applications such as multimedia.

ix) Device management: Automatic & manual device discovery of all Network Elements (NEs) such as Wireless Broadband Base stations, certified CPEs, etc. Further, Web-based graphical view with context sensitive on-line help and information about distributed Network Elements to be provided.

B. Status and Inventory:

The configuration management system shall automatically discover system topology and all elements within, and supports search functions of a group or a single element. Central management system and individual element management system shall display consistent status and inventory information. Configuration requests shall be explicitly confirmed upon success, or flagged with clear failure cause.

C. Network element software upgrade:

Software upgrade shall be conducted in a secure manner, including secured download of new software, and verification of the integrity of downloaded software. Upgrades shall also not cause service interruption, either due to download procedure itself, or due to incompatibility between upgraded network element and its peers. Further, for remote installation, upgrade & correction of the NEs, including downloading of patch application for software corrections in the network and backup on a regular basis All upgrades, both successful and unsuccessful, shall be logged.

II. Fault Management:

- i. Fault Management system shall have the ability to detect and mitigate or recover from faults, and\ to analyze outages, goes beyond the treatment of individual elements or the simple reporting of individual faults.
- ii. Fault management shall enable the detection, isolation, and suggestive correction of abnormal or potentially abnormal operation.
- iii Each node in the network shall be able to detect and isolate faults from its own autonomous perspective without needing to be told about the fault from some centralized entity.

- iv. There shall be advance fault management functionality which can support the reduction of alarms for the transient alarms, toggling alarms, provides alarm correlation and filtering.
- v. The Fault Management System shall support the standard interfaces to higher management systems such as COBRA, SNMP, etc.

vi) Alarm and Event Handling: All alarms from all network elements being managed shall be received and logged. The alarms shall be visible in various ways e.g. displayed in alarm lists on the screens of defined operators; printouts may be automatically generated on specific devices for further treatment.

III. Performance Management

- i. It shall be possible to visualize the performance of the antenna system at every cell/sector.
- ii. Performance Management shall enable monitoring different types of metrics such as detailed call trace from beginning, per call measurements etc.
- iii. It shall be possible to detect traffic related anomalies and trends which are not possible to detect via alarms from the network elements.
- iv. Performance management shall allow threshold definitions on key performance metrics, and shall trigger threshold crossing alerts when the performance falls below specified level. The collection frequency of such key metrics shall be sufficiently high to allow for timely response, and the system must take extra care to ensure such high frequency does not degrade system capacity or stability.
- v. The collected metrics shall provide information to tune the network parameters so the network can run more efficiently, and to help identify and diagnose problems in the network.
- vi) Performance management of Wireless BB equipment sites, include Load over NEs/ sites/ zones, number of active user connections, sessions with detailed parameters, session terminations, access point restarts, positioning events, access denied, Online site usage monitoring etc.

viii)Report Generation: The EMS shall be capable of providing reports such as a)Inventory reports, including current version and status b) Performance reports, by different time cuts (hour, day, week, month, etc) c) Configuration reports iii) Performance characteristics over a specified period of time

IV. Security Management

Security management shall protect against unauthorized access to network control functions, as well as maintaining confidentiality, data integrity and traceability. Security management shall ensure network reliability and integrity. Suitable standard based security measures shall be implemented in all the network components in the offered solution so as to secure the wireless link to offer secure connectivity to the end users

The following activities shall be supported.

- Selective resource access
- Network element function enablement and control
- Access logs
- Security alarms/event reporting
- Data privacy
- User rights checking
- Security breaches and attempts management

V. System administration:

It includes all customer related system and account management tasks such as:

- i) Addition/change/configuration/removal of accounts (username/password, etc) into the database
- ii) Addition/change/configuration/removal of NEs
- iii) Addition/change/configuration/verification/removal of sites.

5.12.6 CUSTOMER PREMISES EQUIPMENT (CPE)

The USPs will provide CPEs, Donglse, handsets, etc. to the users for accessing the wireless broadband services as per their demand. However, the USOF shall subsidize only the CPEs in fixed mode with the following broad requirements:

i) The Customer Premises Equipment (CPE) will support wireless broadband services as per defined QoS to end users. The CPEs are to be used for fixed applications and shall be fully Plug & Play.

ii) The CPE shall be capable of working with any of the certified base station with corresponding certification profile of the deployed technology and provide access to the following wireless Broadband services as per standards of the deployed technology:

- a) The CPE shall support services i.e. Data, Video, Internet, etc .
- b) Prevailing National Regulations shall apply in case of all the supported services.

The CPE shall be able to work in the frequency bands, as defined & allocated by the Government of India/DoT/WPC, as applicable. It shall fully integrate with the deployed network by the USP (s).

iii) The CPE will comply with parameters listed in the following table:

S .No.	Parameter	Specification
1.	Type	One RF unit with antenna, Pole or wall mounted as well as with LAN, and power supply
2.	Services	Data, Video, Internet
3.	Usages	Fixed
4.	Users	Multi
5.	Minimum Sustainable data rate	5Mbps (DL), 1Mbps (UL)
6.	Interface Ports	One or multiple Ethernet 10/100 Base T (RJ45), or any other suitable standard interface as per the deployed technology
7.	Antenna type	Directional Antenna,

8.	Antenna gain	As per requirement up to at least <u>17</u> dBi
9.	Receiver Sensitivity	Compliant to the requirements of the (applicable standard for the applicable profile.
10.	Power management	Automatic Power Control
11.	Network Protocols	IPv4, IPv6, TCP, UDP, PPP, SNMP
12.	CPE Management	(i) Local and Remote software upgrade (ii) User friendly web interface for configuration
13.	Power Supply	90 V to 300V AC, 50 +/- 2 Hz . A DC port (say of 12 V) may also be provided for connecting SPV or external DC supply
14.	Power Arrangement	Powering of the outdoor unit (as applicable) shall be typically through the CAT 5 cable
15.	Provision for External DC supply	A 12 V DC socket shall be provided for connecting SPV or external DC supply
16.	Maximum Power Consumption	50W
17.	Interconnecting Cable	Outdoor unit (as applicable) shall be connected to indoor unit through Ethernet cable. Distance at least upto 40 mts. between outdoor unit and indoor unit, to be supported.
18.	Protection	Grounding/Lightening protection/Surge protection shall be provided. Details to be furnished.

- iv) Minimum receiver sensitivity in dBm of all categories of CPEs with different modulation levels/coding shall be furnished :
- vi) **Maximum Transmit Power:** CPE shall produce an EIRP spectral density as per National regulatory requirements as modified time to time.
- vi) Interconnectivity and Interoperability

The CPE shall be Certified” against the current/latest release of the deployed technology standard

5.13 ELECTRIC POWER ARRANGENENT FOR EQUIPMENT

To meet the electrical power requirements of the equipment, the USP(s) shall arrange to provide 3-Phase/1-Phase 440V/230V AC Main Power Supply of adequate load capacity (in KVA).

Distribution of the AC Power Supply to the equipment shall be ensured through distribution panels with MCBs of appropriate capacity.

5.14 DC POWER SUPPLY AND POWER BACK-UP

For ensuring reliable and uninterrupted power supply to the equipment at the Base Station site in rural areas, Power Plant , Battery & diesel Engine Alternator of adequate capacity & suitable configuration shall be provided.

Complete power plant and battery drawings and information regarding inter-connecting arrangements and layout shall be made available on site. Maintenance spares including spares for control panel and spare fuses should also be provided at the site.

5.14.1 SMPS POWER PLANT

I) A provision for DC power plant along with battery backup is to be made for Base stations working on -48VDC. It will be equipped with Battery Health Check systems and Remote Monitoring facility meeting the relevant specifications as per ITU-T/international standards/TEC GR/SMP-01/05 Jan 2005.

II) SMPS Power Plant capacity should be such that it is able to take following loads simultaneously:-

- (i) Minimum 10% of rated capacity of MFVRLA battery,(trickle charging and also replenishment charging) load
- (ii) Equipment load (Base Station), with minimum 50% additional capacity to cater to equipment upgrade/new equipment, and
- (iii) Adequate load for backhaul equipment (such as OFC equipment / Radio Link etc.) with minimum 50% additional capacity to cater to equipment upgrade/new equipment.

III) The DC power plants based on SMPS (Switched Mode Power Supply) technology should be modular in nature with N+1 configuration where N is the capacity of each SMPS module in the power plant.

IV) SMPS Power plants are to be compatible with VRLA batteries and are to be with Battery Health Check systems and Remote Monitoring facility.

V) Suitable switching arrangement for inter connection between various items of SMPS Power Plants, MFVRLA Battery sets and their interconnection in switching cubicle and further power distribution to equipment as required for the ultimate capacity shall be provided.

5.14.2 BATTERY BACKUP

The Battery Bank should be capable of at least 6 Hours or higher **Backup time**, depending upon the requirements, so as to ensure that battery set is not required to be discharged beyond 80% of its rated capacity at any time to meet 100% load. The

nominal output voltage of battery bank will be -48V D.C. Maintenance Free battery banks (comprising 2-volt nominal storage cells) utilizing fire-retardant material should be provided at each location. The detailed specifications will meet or exceed the relevant ITU-T/TEC /international standards.

5.14.3 DIESEL ENGINE ALTERNATOR (in silent canopy)

Diesel engine alternator set of adequate capacity, in silent canopy, shall be provided to meet the load requirement for the planned and future expansion. The detailed specifications will meet or exceed the relevant Indian Standards (IS)/International/British Standards, as applicable ITU-T/TEC/international standards. The engine and the enclosure will be approved from the designated authority and will have necessary environmental and other clearances.

While dimensioning the **Diesel engine alternator**, nominal power factor (PF) of 0.8, with loading not beyond 85% of its rated capacity at any time to meet 100% load may be typically assumed. A summary is given below:

- a) 10KVA 3-Phase 440V /1-Phase 230V (for site with 1 base stations)
- b) 1500 RPM 50 Hz
- c) Capable to run for a period which may even exceed 24 hours at a time with 10% overload for a period of 1 hour during every 12 hours period while operating continuously at full load
- d) AMF panel (Auto Start)
- e) Minimum 100 Litres Diesel Capacity or suitable capacity for storing fuel for running for at least 24 hours continuously, whichever is more.
- f) Compliance to CPCB Noise Norms of MOEF
- g) Compliance to CPCB emission norms of MOEF

Following documents shall be made available at the site for Engine and Alternator:

- One set of Engine and Alternator hand book.
- One panel – wiring diagram
- One factory test certificate.
- Maintenance recommendations & procedures.
- Maintenance intervals.
- Generator running hours.
- Logbooks

5.14.4 Considering erratic, unreliable AC grid power supply, coupled with long duration power cuts in rural areas, the suggested Power Plant , Battery & Diesel Engine Alternator configuration for a typical standalone Base Station is as follows (assuming 25 A current for about 1.25 KW dc load):

S. No.	Equipment	Capacity
i	Battery	2 x 200 AH
ii	Power plant	25A (3+1)

iii	Engine Alternator	10 KVA
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However, the exact configuration of Power Plant, Battery & Diesel Engine Alternator will depend on the actual site requirements, taking into account the No. & type of equipment, their power consumption, as well as availability of AC grid supply, etc., and it shall be capable to meet the tender conditions and final deliverables for providing power as cited in the tender document, and the USP (s) shall provide necessary justification in this regard.

5.14.5 Considering the Government's emphasis on environmental friendly nature of **Green /Renewable energy sources, such as solar, wind, etc.**, the bidders are encouraged to deploy them, along with Power Plant, Battery back-up and Diesel Engine Alternator set, that may result in operation of the diesel engine alternator for less No. of hours. For deriving more benefits out of such energy sources, the battery should have fast charging capability and should be able to accept higher charging current. Further, under float charging conditions, the battery should be fully recharged in 5-6 hours (as at many places in rural areas, the AC Grid power supply may be erratic with only 5-6 hours availability). In case they harness suitable non -conventional sources of energy, they may become eligible for subsidy from Ministry of New & Renewable Energy (MNRE), Government of India, as per their prevailing rules, as amended from time to time. Along the lines of the National Solar Mission of the MNRE that is offering part subsidy, it is proposed that as part of this tender, the USOF will extend additional subsidy equivalent to one third of the "MNRE subsidy provided under National Solar Mission" to encourage Renewable Energy. Thus this component of subsidy will not form part of Benchmark Subsidy calculated for this tender.

5.14.6 Further, if a Base Station site, comprising Terrestrial Wireless Broadband Base Station along with associated equipment (if any) and Backhaul equipment, has power requirement of up to 100 watts only, then a green/renewable power solution (such as solar) with adequate battery back up of minimum 72 hours for meeting the said site's power requirement may be provided, without provision of Engine Alternator. However, the aforesaid green/renewable power solution shall have suitable provision for charging the batteries through AC power.

5.15 AVAILABILITY OF INTERNATIONAL B/W:

As wireless broadband connectivity will be extensively used for accessing the Internet, which is a world-wide-web, it is imperative that the USP(s) shall make available adequate **International B/W** so that the subscribers will be able to access websites hosted outside India. Accordingly, typically about 10 kbps **International** bandwidth may be taken for each subscriber. However, this is only for guidance purpose and the exact provision, which will depend on the actual usage pattern, should be able to meet the deliverables & QoS requirements, as indicated in the Tender Document.

5.16 COVERAGE SPECIFICATIONS

Considering that any standard technology may be deployed for implementing the scheme, the details of the levels for meeting the deliverables and QoS requirements for the engineering purposes will be furnished by the USP as follows:

- (a) Indoor Coverage: Signal level measured at street level shall be better than -----dbm.
- (b) In-car Coverage: Signal level measured at street level shall be better than -----dbm.
- (c) Outdoor Coverage: At least 95% of the remaining coverage area. Signal level measured at street level shall be better than ----- dbm.

It may be mentioned that under fixed & nomadic conditions, the network will provide broadband connectivity at speed of minimum 512 kbps or above, upgradable to 2 Mbps on demand, with 1:20 contention ratio. It may be mentioned that the in the fixed mode broadband access at the subscriber's premises, outdoor CPE with external antenna may be used; however, broadband access in nomadic & mobile conditions outside the customer premises, is envisaged through a USB Dongle/ data card/mobile handsets, etc. and thus for accessing the broadband, integrated folded antenna of max. 2 dB gain may be used. Mobility will be supported with vehicular speed of at least 30 km/hr, and seamless connectivity to the network should remain available.

A suitable methodology for broadband coverage measurement will be evolved by DoT/USOF and the DoT/ TERM document titled "Test schedule For Service Approval of Mobile Services" No. TERM/TSTP/SA 1 (Issue- Sep. 2009) may be considered for reference purpose in this regard.

5.17 OTHER TECHNICAL REQUIREMENTS

I) EMC/EMI REQUIREMENTS: The equipment shall meet/exceed EMC/EMI requirements as per TEC Standard No. TEC/EMI/TEL-001/01/Feb.-09 (including latest revisions and amendments) or equivalent ITU-T/International standards.

II) SAFETY REQUIREMENTS

The equipment shall comply with applicable requirements specified in IEC 60950(or equivalent international standards) in general and shall also comply with other equipment specific Safety standards, as applicable.

III) EMF RADIATION REQUIREMENTS

The EMF radiation from base Station shall be as per DoT instructions/ National regulation. Test Procedure for Measurement shall be as per TEC /TP/EMF/001/01

IV) ENVIRONMENTAL SPECIFICATIONS:

Equipment and their components provided under this specification shall operate reliably under the following environmental operating limits.

Temperature Range and relative humidity:	
To Specification	0 to +50 °C, 50%RH
Operation without damage	5 to +55 °C, 50%RH
Shipping/storage	-5 to +60 °C, 50%RH
Max. Temperature with guaranteed specifications	35 °C, 95% RH
Max. Temperature for equipment survival	40 °C, 95%RH
Elevation: (operation)	To 3,500 m

The environmental standards complied shall meet/exceed the provisions prescribed above or in the respective TEC GRs as, applicable. The testing schedule and procedure shall comply with DoT document QM-333 or any other international standard as applicable.

V) LIGHTNING AND TRANSIENT VOLTAGE PROTECTION:

Bidder shall provide lightning and transient voltage protection for all telecommunications equipment, in accordance with the following-

- a) Should have proper earthing arrangement as per ITU-T/IEC/BIS/TEC standards.
- b) At the outside cable plant point-of-entry of all cabling penetration, the Bidder shall provide lightning and transient voltage isolation as well as surge protection, wherever applicable, for the inside-plant cabling, wiring, and all terminations and equipment.
- c) All equipment installed, under this specification that requires 230VAC primary power, shall be surge protected.

VI) STATION SAFETY EARTHING AND SIGNAL GROUNDING:

The earthing arrangement at the sites shall be adequate for the equipment to be installed, the USP shall ensure to bring the **Earth Resisitance** values within the specified range.

The equipment shall meet the IEC publication 60950 (2001) in general for safety shall also comply with other equipment specific Safety standards, as applicable. For each facility, the Bidder is responsible for meeting the equipment earthing requirements as per applicable standards, i.e. all safety earthing and signal grounding shall be in full compliance with the relevant international standards.

The Bidder is responsible for providing all required earthing/grounding cable and installation. The Bidder shall be responsible for providing earthing systems including pits, earthing studs and earthing net etc, as required, wherever the existing station earthing is found to be unsuitable for equipment being provided. In case, new earthing studs are provided, the Bidder shall be responsible for connection of new studs to the existing studs, if any.

VII) FIRE DETECTION AND FIRE EXTINGUISHER:

The USP shall make proper arrangements for fire detection and fire extinguisher system, as per fire safety norms applicable for that location, and necessary arrangement for the security, safety and protection of the systems. Any items, if not specifically mentioned, but considered essential for completion of, all respects, **Setting up of the Network and Provision of Wireless Broadband Services**, shall be deemed to be included in the scope of procurement and services of the USP(s).

VIII) EQUIPMENT AVAILABILITY:

The Mean Time Between Failure (MTBF) of the deployed equipment shall be at least 80,000 hours. The calculations shall be as per international standards. An MTTR of maximum 3 hours may be assumed for ensuring the equipment availability to meet the tender requirements.

5.18 COMMISSIONING TESTING BY USP

5.18.1. The USP has the primary responsibility to carry out testing at the equipment site locations, broadband capacity & coverage measurements, testing of Backhaul equipment, Power plant, Battery, Engine Alternator; tests on alarms and status display, commissioning tests, and all other required tests on network and trial runs including simulated/active test so as to ensure that the installed network meets all the requirements of the tender. The USP shall arrange all necessary test instruments, manpower, vehicles, Drive Test Tools, post-processing tools, test gear, accessories etc. for conducting all testing. All such necessary test instruments, test gear, accessories will be as per TEC/International Standards & specifications, as applicable. The USP shall conduct the tests on the network, for evaluating performance, coverage, capacity, etc.

5.18.2. The USP shall ensure that all tests and measurements done at sites and for each link are properly categorized and compiled in one Document for each District that will be an essential pre-requisite for DMA to undertake system Certification/validation/testing.

5.18.3. VALIDATION TESTING

Before commissioning of the actual wireless broadband network, the Administrator, USOF may call for validation of the proposed network solution, **within six months of signing of the Agreement**, in all the specified villages of a mutually chosen district. USOF reserves the right to seek for validation tests being conducted in the presence of its designated teams/DMA.

In the validation, the USP will, inter-alia, demonstrate his approach to the wireless broadband scheme as well as the suitability of the offered network solution to meet the deliverables, coverage, capacity, functionalities, and other requirements of the tender. Inter working with CPEs/Handsets etc., of various vendors, wherever feasible, will also form an essential part of the validation process. The specific areas for the validation configuration will be identified by the USOF/DMA. For services and other tests, the configuration shall be decided by testing authority designated by USOF and the testing methodology shall be

finalised in consultation with the bidder. The USP at their own cost shall provide all the necessary testing equipment/Tools required for validation of the system.

A “Test Schedule & Test Procedure” for conducting the validation will be finalized by the USOF or its nominee, in consultation with the USP. The validation process will be completed within a period of 1 months of the date of offering of the network to USOF. A Validation Report, properly categorizing and compiling all tests and measurements conducted on the offered network in one Document, will be prepared. Any deficiencies/shortcomings, found during validation in meeting the tender requirements, will be rectified and set right by the USP immediately in such a manner that the rolled out network shall be fully compliant with the tender requirements, at no extra cost to the USOF.

5.19 CERTIFICATION TESTING

As per clause 6.9 of Operating Conditions: Section VI, Certification of the commissioned network will be carried out by the DMA. A “Test Schedule & Test Procedure” for conducting the validation will be drawn for this purpose. A Certification Report, properly categorizing and compiling all tests and measurements conducted on the offered network in one Document, will be prepared. The USP at their own cost shall provide all the necessary testing equipment/Tools required for validation of the system. Any deficiencies/shortcomings, found during validation in meeting the tender requirements, will be rectified and set right by the USP immediately in such a manner that the rolled out network shall be fully compliant with the tender requirements, at no extra cost to the USOF.

SECTION -VI

OPERATING CONDITIONS

6.1 GENERAL

The terms and conditions of the CMTS/ UASL/ ISP/ BSO License Agreement (**Annexure-6**), and WPC frequency assignment/wireless operating license, as applicable, in the entire subject service area for provisioning of the said wireless broadband services, shall prevail and shall be binding *mutatis mutandi*. The same shall also be applicable in case of migration to or award of new license in lieu of the CMTS/ UASL/BSO/ISP license.

6.2 RIGHT TO INSPECT, TEST AND MONITOR

6.2.1 The Administrator or his authorized representative shall have the right to inspect, test and monitor the sites, network & all the equipment installed for providing the wireless broadband service, including Base stations, backhaul, core broadband equipment, Servers/routers, CPEs, terminating interfaces, distribution frames, Batteries, Power Plants, Engine Alternators, hardware/software, memories, etc. and to conduct the service performance tests, including drive tests, service quality tests, etc. and to enter into dialogue with the systems through input/output devices or terminals. The USP(s) will provide all the necessary facilities at their own cost for monitoring of the system, as required by the Administrator or its authorized representative(s). The Inspection will ordinarily be carried out after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

6.2.2 Wherever considered appropriate, Administrator may conduct any inquiry either suo-moto or on a complaint, to determine whether there has been any breach in compliance of terms & conditions of the Agreement by the Universal Service Provider(s), and during such inquiry, the USP(s) shall extend all reasonable facilities without any hindrance.

6.3 TECHNICAL AUDIT OF THE NETWORK

USOF reserves the right to carry out technical audit of the network, directly, or through any designated monitoring agency, from time to time, during the validity of the Agreement, and the USP(s) shall take necessary corrective measures to conform to the performance parameters stipulated in the Bid document within the period of performance guarantee.

6.4 PROVISIONING OF BROADBAND CONNECTIONS

The Universal Service Provider(s) shall ensure that the broadband connections, as mentioned in the monthly report, have actually been provided in the specified areas under consideration, being served by the Base stations installed with the subsidy support from USO Fund. A certificate to this effect is to be provided by the USP(s) in the monthly report in the prescribed proforma.

6.5 UPGRADATION OF EQUIPMENT

The USP may upgrade the existing equipment by installing add-on equipment, if required, during the validity of the Agreement provided it meets all other performance parameters of Quality of Service.

6.6 ROLL OUT

- 6.6.1 i) **Roll Out obligation for setting up the network and actual commencement of the Service:** The USP shall provide **seamless** coverage to all the specified rural and remote areas of the subject bidding unit, by setting up & commissioning of the wireless broadband network for provision of wireless broadband services, including the actual commencement of the wireless broadband service provisioning to the subscribers, conforming to the specified specifications and in accordance with the terms and conditions of the Agreement, **within a period of 24 months of the signing of the Agreement. Further, the bidder shall also ensure that 10% the targeted districts of the subject Service Area are covered, as per the above specified norms, within 12 months, 50% within 18 months and complete coverage within 24 months of the signing of the Agreement.**

For ensuring broadband coverage of all the specified rural and remote areas as indicated in the tender document, the following methodology shall be adopted:

For the purposes of this tender, the **wireless broadband coverage of a district** means that wireless broadband services are available (including the actual commencement of the wireless broadband service provisioning to the subscribers, conforming to the specified specifications) in all the specified villages of the subject district, as indicated in this tender document. Regarding the **wireless broadband coverage of an entire bidding unit or Service Are** (limited to the specified districts indicated under this tender), it means that wireless broadband services are available (including the actual commencement of the wireless broadband service provisioning to the subscribers, conforming to the specified specifications) in all the specified districts of the subject **bidding unit or Service Are** as indicated in this tender document.

The **wireless broadband coverage of a village** implies that deliverables, as defined in this tender, are available in the entire subject village, including in streets, fields, roads, highways, along with indoor coverage in residential areas/institutions, etc., as applicable. A village having 90% probability or more of wireless broadband coverage will be treated as covered. **A suitable methodology for broadband coverage measurement will be evolved by DoT/USOF and the DoT/ TERM document titled “Test schedule For Service Approval of Mobile Services” No.TERM/TSTP/SA 1 (Issue- Sep. 2009) may be considered for reference purpose in this regard.**

A village, having less than 90% probability of wireless broadband coverage will be treated as **uncovered**.

Seamless coverage of the specified areas: An area shall be deemed to have seamless coverage if wireless broadband service remains available while moving from one

village to another, without any interruption in call session/ connection and disturbance. Further details in this regard, including implementation of the above coverage methodology, are given in Annexure.....

ii) Roll Out obligation for No. of connections per district shall be as follows:

S. No.	Roll out obligations for No. of connections per district	Bidding Unit (Service Area with the districts as per Annex I): AP, Gujrat, Karnataka, Maharashtra, Tamil Nadu	Bidding Unit (Service Area with the districts as per Annex I): UP (E), UP (W), Rajasthan, Punjab, MP, Kerala, Haryana, WB	Bidding Unit (Service Area with the districts as per Annex I): Orissa, NE, J & K, Himachal, Bihar, Assam
1.	Total No. of broadband connections to be rolled out by the end of the third year of the Agreement in a district	No. of specified villages for coverage in the subject district x 2	No. of specified villages for coverage in the subject district x 1	No. of specified villages for coverage in the subject district x 1
2.	Total No. of broadband connections to be rolled out by the end of the fifth year of the Agreement in a district	No. of specified villages for coverage in the subject district x 6	No. of specified villages for coverage in the subject district x 5	No. of specified villages for coverage in the subject district x 4

6.6.2 The USP(s) shall submit an indicative roll out plan, including but not limited to the list of Base Station sites with their location names & census codes, Backhaul, core BB network, Power plant/Battery/ Engine Alternator, etc for each district within four (4) months’ of the date of signing of the Agreement, which will be followed by a PERT chart for the monitoring of the scheme.

6.6.3 The Rollout period may be extended, if deemed fit, by the Administrator under exceptional circumstances.

6.6.4 The USP(s) shall provide a monthly statement, giving details of the districts, where the wireless broadband services has been commissioned along with particulars of wireless broadband base stations (including their names, locations) and broadband connections provided there from respectively, as per the prescribed proforma in **Annexure----**.

6.7 LIQUIDATED DAMAGES AND PENALTIES

6.7.1 i) For the districts where the **wireless broadband network** and services have not been not provided as per the rollout obligations described in **clause 6.6** of **Section VI**:

OPERATING CONDITIONS of the tender document, without prior written concurrence of the Administrator; the delayed period shall entail recovery of Liquidated Damages (L.D.). Provided further that for the districts where the wireless broadband network is commissioned within 30 calendar days of the expiry of the roll out period from the effective date of the Agreement, the Administrator shall accept the districts without levy of the L.D charges. For the shortfall in commissioning of the wireless broadband network in various districts after the 30 days of the expiry of the roll out period as per clause 6.6, the Administrator shall recover Liquidated Damages at the rate of 5% of the total subsidy payable for the respective districts for each calendar month of delay or part thereof, subject to a maximum of two months period (10% of the total subsidy thus payable for the districts). For the purpose of charging the Liquidated Damages, the representative rate for the respective district, where the wireless broadband network is not commissioned as per the roll out obligation, shall be taken into account.

ii) For the districts where the **roll out of the wireless broadband connections** is not achieved as per the rollout obligations prescribed in **clause 6.6.1 (ii) of Section 6: OPERATING CONDITIONS** of the tender document, without prior written concurrence of the Administrator; the EQS due shall be deferred till the specified **roll out of the wireless broadband connections** is achieved.

6.7.2 In case, the USP fails to roll out the wireless broadband networks in the service area, as per the prescribed roll out plan, within three months after the expiry of the roll out period, action as per **Clause 4.24 of Section 4: Commercial Conditions**, shall be taken.

6.7.3 In case, the USP fails to provide wireless broadband coverage to some specified villages in a district **as per specified norms under the scheme**, the subsidy deduction against such non-compliance shall be as follows. :

Name of the District: ---- Bidding Unit:----- State:----

S. No.	Percentage of the specified No. of villages broadband covered as per specified norms in a district under the scheme	Subsidy deduction
1.	95%=< and <98%	2.5%
2.	90%=< and <95%	5%
3.	85%=< and <90%	10%
4.	80%=< and <85%	20%
5.	Below 80%	100% subsidy reduction

6.8 VALIDATION AND COMMISSIONING OF THE WIRELESS BROADBAND NETWORK

Before commissioning of the actual wireless broadband network, the Administrator, USOF may call for validation of the proposed network solution, **within six months of signing of the Agreement**, in all the specified villages of a mutually chosen district. In the validation, the USP will, inter-alia, demonstrate his approach to the wireless broadband scheme as well as the suitability of the offered network solution to meet the deliverables, coverage, capacity and other requirements of the tender. However, such a validation shall not constitute any approval of the technology but only be in the nature of solution demonstration, and this validation shall in no way absolve the USP(s) of any obligations under this contract, and the USP shall be fully responsible for implementation of the entire scheme, as per this tender requirements. **The details in this regard are given in Section 5: TECHNICAL CONDITIONS.**

For setting up and commissioning of the **WIRELESS BROADBAND NETWORK in the specified rural and remote areas**, the USP(s) should conduct a detailed site survey, immediately after award of contract, at all existing/new proposed sites, to assess and provision for land / building / shelter / space requirements, deciding of wireless base stations & backhaul, core BB network, ACs, Power plant/Battery/ Engine Alternator, etc. for them, available and additional air-conditioning, and all other aspects required for complete site engineering. Administrator USOF will be kept informed of the survey and the results obtained as also the engineering plans developed accordingly for each of the Districts of the Service Area under consideration for monitoring the progress.

The USP shall be fully responsible for the **Network Design & Engineering** in all the districts of the Service Area. It includes design of the Wireless Broadband network in each district of the Service Area, by undertaking detailed network engineering, including radio link engineering for seamless broadband coverage of the specified areas by Base Stations. It will assess the requirement of adequate space, towers of required height and other facilities such as power supply, air-conditioning equipment, earthing, etc. The USP(s) carry out a detailed dimensioning and quantification of all items, such as Base Stations, Backhaul, Cor Broadband equipment/network, D.C. power supply requirement, including power plant equipment, storage batteries, Engine Alternator set, A.C. power supply requirement, etc.

The USP(s) has full responsibility to integrate the all equipment of the network and carry out inspection and testing of supplies and services at all stages viz., FAT (Factory Acceptance Testing), verification of supplies, local testing of system and of A.C./D.C. power supplies at the equipment, Base Stations locations, backhaul, testing of alarms and status display, network testing, Service coverage and Drive Test Tools, loop testing, commissioning tests, tests on network management system and trial run including simulated/active traffic loading, as applicable.

The USP(s) shall ensure that at all the equipment, installed under the scheme meets the minimum specified capability and interface modules, as per the relevant clause of **SECTION:5 TECHNICAL CONDITIONS**. All tests and measurements should be done and are properly categorized and compiled in one T&M (Test and Measurement)

Document for each District that will be an essential pre-requisite for DMA to undertake network for validation and certification.

On completion of Wireless Broadband coverage of all the specified villages in a district, the *USP shall self-certify and declare the Wireless Broadband Network successfully commissioned in that district*, in all respects, as specified in **SECTION: 5 TECHNICAL REQUIREMENTS**, inter-alia, the installation, testing and commissioning of the Base Stations & Backhaul equipment of appropriate technology, capacity & coverage for meeting all the deliverables, as well as Power plant, Batteries, Engine Alternator, etc, as per tender requirements. And the USP is ready to provide wireless broadband service to the subscribers as per the terms of the Agreement. The USP shall provide details in the **Appendix (FI-A and FI-B) to Annexure VII**. After completing the above, the USP shall offer the commissioned Wireless Broadband Network to the USOF for validation, inspection testing and certification

6.9 CERTIFICATION OF THE COMMISSIONED WIRELESS BROADBAND NETWORK

- 6.9.1** On completion of the roll out, the USOF, directly or through a DMA, shall carry out inspection and testing of the wireless broadband network as per prescribed test schedules for their conformity to the specifications. The DMA will conduct the inspection and testing and issue the certification as per *Appendix-F-II/ Appendix-F-III to Annexure VII*, as applicable. The USP(s) shall provide all reasonable facilities and assistance like testing instruments and other test gadgets including access to drawings and other details to the DMA at no cost to the Administrator.
- 6.9.2** The USP(s) shall be fully responsible for making the system work. In case, at the time of testing by the DMA, it is established that the technology/system deployed fails to meet the specified requirements or is unable to effectively extend the wireless broadband services to the targeted rural/remote areas, the USP(s) shall replace the entire equipment at own cost, wherever deployed.
- 6.9.3** During the validity of the Agreement, the USP(s) shall, carry out software and hardware upgrades, add additional interface modules and reconfigure, as per requirement and demand, for provisioning wireless broadband services on demand to rural/remote areas. It will be ensured that all performance parameters of the network and QoS parameters are maintained.

6.10 PERFORMANCE LEVEL

The USP shall ensure that the QoS of the “wireless broadband network” meets the relevant TRAI Quality of Service parameters. The USP shall be required to fine tune the network during the maintenance phase to maintain defined QoS levels as indicated in the tender document.

Further, the **Average Percentage Availability** of the ‘wireless broadband network’ for the purpose of this tender, which is defined as average percentage network ~~(i.e.~~ up-time in each district, shall be better than or equal to 98%.The USP (s) are required to maintain untamperable log of availability of network/services provided.

Average Percentage Availability of the ‘wireless broadband network’ (i.e. up-time) in each district is computed as follows:

Average Percentage Availability of Wireless BB Network for a district (%)= 100
 - Base Stations average downtime (i.e. not available for service) for a district in percentage (%)

Measurement of Base Stations Average Downtime (i.e. not available for service)
 The Base Stations **average downtime (not available for service)** shall basically measure the downtime of all the Base Stations of the district, including their transmission links/circuits during the period of a quarter, but exclude all planned service downtime for any maintenance or software upgradation. The total duration in minutes of all such instances of downtime of Base Stations shall be calculated. Further, while computing the above, the down-time, affected due to force majeure conditions shall be excluded for calculation purposes.

Base Stations average downtime (i.e. not available for service) **for a district in percentage (%)=**

$$\frac{\text{Sum of downtime of Base Stations in the Quarter in Minutes i.e. total outage time of all Base Stations in Minutes in the district during a quarter} \times 100}{90 \times 24 \times 60 \times \text{No. of Base Stations in the network in the district}}$$

The Equated annual subsidy, payable for a district shall be subject to a minimum Accumulated Percentage Availability of the ‘wireless broadband network’ in a district, covering all causes of downtimes in each quarter of the year, for which equated annual subsidy is claimed, as prescribed below. A deduction of the prescribed percentage of the quarterly equated annual subsidy, payable for the district(s), shall be made for the subject Quarter(s), as given below:

S. No.	Average Percentage Availability of Wireless BB Network in a district	Subsidy deduction for the respective quarter
1.	95%=< and <98%	2.5%
2.	90%=< and <95%	5%
3.	85%=< and <90%	10%
4.	80%=< and <85%	20%
5.	75%=< and <80%	30%
6.	Below 75%	100% subsidy reduction

The calculation of performance level and of deduction (if required) is shown in **Appendix F VI VII-B to Annexure VII.**

6.11 NETWORK OPERATIONS RECORD

The USP shall keep a record of the Wireless Broadband network, built under the scheme, along with equipment details and network connectivity of Base Stations, Backhaul, Core Broadband Equipment, etc., capacity created and the Wireless Broadband Services provided to subscribers and also maintain Base Station-wise faults and rectification reports of the network, including of Base Stations, Backhaul equipment, battery, power plant, Engine Alternator, and other related equipment. The full details in respect of the service rendered, will be maintained, which will be produced before the Administrator or TRAI, as and when and in whatever form desired.

6.12 REPORTING OF SERVICES PROVISIONED

The USP shall provide the commissioning report for the district(s), as per **Appendix ()** to **ANNEXTURE ..**, and the details of the Wireless Broadband Connections provided, along with their types, on **quarterly basis** as per **Appendix (F VI)** to **ANNEXTURE VII**. This will be certified in the prescribed Performa by a competent and responsible representative duly authorized by the Host Operator.

6.13 HANDLING SUBSCRIBERS' COMPLAINTS

Proper arrangement should be made by the USP for reporting/ booking service related complaints. The USP shall be responsive to the complaints lodged by the Subscribers and shall rectify the deficiencies and maintain the history sheets for each installation, statistics and analysis on the overall maintenance status.

6.14 CONFIDENTIALITY OF INFORMATION

The terms and conditions of the applicable DoT License agreement, *as the case may be*, shall be binding *mutatis mutandi*.

6.15 PROHIBITION OF CERTAIN ACTIVITIES BY THE UNIVERSAL SERVICE PROVIDER

The terms and conditions of the DoT License agreement, *as the case may be*, shall be binding *mutatis mutandi*.

6.16 SECURITY CONDITIONS

The terms and conditions of the DoT License agreement, *as the case may be*, shall be binding *mutatis mutandi*.

6.17 APPLICATION OF INDIAN TELEGRAPH ACT

The terms and conditions of the DoT License agreement, *as the case may be*, shall be binding *mutatis mutandi*.

6.18 OTHER CONDITIONS

Verification of the all equipment, network and provision of wireless broadband services shall be conducted, directly or through agencies, nominated by the Administrator.

Section -VII
FINANCIAL CONDITIONS

7.1 SUBSIDY FROM UNIVERSAL SERVICE OBLIGATION FUND

- 7.1.1 Financial Support to the Successful Bidder (Service Provider) shall be in the form of a percentage of the Capital Recovery for rolling out the Wireless Broad Band Network and provisioning of Subsidized Wireless Broad Band Services in accordance with the terms and conditions of the Agreement. The support shall be payable as subsidy on the basis of the outcome of the Bidding process as per details given in Section-8 Terms of Financial Bid.
- 7.1.2 The subsidy shall be paid in Indian Rupees as per subsidy disbursement schedule described below at the district-wise subsidy rates emerging from the Bidding process. This district-wise subsidy rates and the schedule of payment shall be specified in the Agreement.
- 7.1.3 The Service Provider shall receive the subsidy towards roll out of the Wireless Broad Band Network as per **Annexure I-1**. The subsidy shall be due from the date of successful completion of the work as detailed below.
- 7.1.4 Subsidy support for fixed CPEs to be procured and owned by the Service Provider and supplied rent free against working USOF Tariff Plan Connections shall be provided at the rate of Rs. 2000/- on net addition basis. This rate shall be reviewed periodically by Administrator, USOF and decision of the Administrator regarding applicable rates shall be final.
- 7.1.5 Subsidy Claims shall be preferred within thirty (30) days of the end of the quarter in which they become due, with each Quarter ending on 30th June, 30th September, 31st December and 31st March.
- 7.4.6 The equated quarterly subsidy claim for a part of the quarter will be computed with reference to the actual number of days in that quarter.
- 7.4.7 Each quarterly installment of subsidy shall be disbursed generally within 30 days of receipt of a valid claim.
- 7.1.8 The Quarter in which the Date of Signing of the Agreement falls shall be considered to be the first Quarter of the Agreement.
- 7.1.9 The Subsidy claim shall be duly certified with an Affidavit as per Annexure VII by a representative of the Service Provider, duly authorized by a Board resolution of the Service Provider.

7.2 SCHEDULE FOR DISBURSEMENT OF SUBSIDY BY THE ADMINISTRATOR TO THE SERVICE PROVIDER FOR WIRELESS BROAD BAND NETWORK AND SERVICES

Subsidy shall be disbursed in a phased manner over the period of the Agreement. Twenty percent (20%) of the subsidy for each district shall be disbursed upon commissioning of the Wireless Broad Band network in the relevant district. Twenty percent (20%) of the subsidy for the entire Service Area shall be disbursed upon the commissioning of the entire Service Area Wireless Broad Band Network. The balance sixty percent (60%) subsidy due against each district shall be payable in Equated Annual Subsidy (EQA) installments over a period of five years.

7.2.1 **District Commissioning Claim**

Twenty Percent (20%) of the subsidy for each district shall become due at the end of the Quarter in which the Wireless Broad Band network in that district is commissioned. The Service Provider shall submit the first claim in Format as per Annexure-VII along with Attachment-I and Attachment-II. In support of the District Commissioning Claim, the Service Provider shall be required to submit self-certificate giving details of the Wireless Broad Band network set up as per proforma given in Appendices (FI-A) and (FI-B) to Annexure VII. This claim along with supporting documents should be submitted within 30 days of the end of the quarter in which the network of the district is commissioned.

7.2.2 **Service Area Commissioning Claim**

Twenty Percent (20%) of total subsidy payment due as per Agreement for the Service Area shall be paid on commissioning of the entire Service Area Wireless Broad Band Network as specified in Annexure I.1 of the tender document. The Service Provider shall submit the Service Area Commissioning Claim in claim format Annexure-VII along with Attachment-I. In support of this claim the Service Provider shall be required to submit a copy of the certification of completion of work of all the districts (entire Service Area Wireless Broad Band Network) which shall be given by the DMA as per Appendix (FII) to Annexure VII. This claim may be preferred at the end of the relevant quarter in which the completion of all the districts is certified.

7.2.3 **Equated Quarterly Subsidy Claims**

The Balance sixty percent (60%) of total subsidy payment due as per Agreement for each district will be paid in twenty Equated Quarterly Installments (EQA) over a five year period following the commissioning of the network in the subject district. Each EQA claim shall be for 3% of the District Subsidy as per Agreement. The claim for EQA is to be preferred in Annexure-VII along with Attachment-I and Attachment-III.

7.2.4 The first EQA claim for a district shall become due at the end of the quarter in which the Wireless Broad Band network of that district is commissioned. However, no EQA claim may be lodged before the end of the ninth quarter from the date of signing of the Agreement. The first installment of EQA will be released subject to certification of commissioning of the Wireless Broad Band Network of the relevant district by the DMA. This would be as per Appendix (F-II) to Annexure VII in case the network for all the districts of the relevant Service Area (Entire Service Area Wireless Broad Band Network) has been commissioned within the prescribed roll out period as per Clause 6.6 of Section

VI, Operating Conditions, of the tender document and duly certified by the DMA as per **Appendix (F-II) to Annexure VII**. However, in case the Service Provider is not able complete the network of all the districts in the prescribed roll out period, the DMA shall conduct verification work as per Clause 6.8 of Operating Conditions of tender for only the completed districts and certify the same as per **Appendix (F-III) to Annexure VII** which may be submitted with the first EQA claim of the relevant district.

7.2.5 The second EQA claim for a district shall fall due at the end of the next quarter from the date of submission of the first EQA claim of the relevant district and so forth. Third, Fourth, etc. EQA claims may be lodged at the end of the Quarter in which they fall due. Each EQA claim must be accompanied by a statement of Continuation of Services in the form of **Appendix (F-IV) to Annexure VII**, and Network Availability Report in the form of **Appendix (F-V (A&B)) to Annexure VII**. Each EQA claim must also be supported by a Subscriber MIS Statement in the form of Appendix (F-VI) to Annexure VII detailing the Wireless Broad Band Subscribers for each BTS in the District.

7.2.6 Following supporting documents shall be submitted along with all the prescribed Claim Statements and thus form an integral part of the subsidy claim:

- (a) The claim shall be duly certified as per **Annexure-VII** by a representative of the Service Provider duly authorized by a board resolution of the Service Provider.
- (b) All claims for subsidy shall be accompanied by a pre-receipted bill with revenue stamp.
- (c) In addition to the hard copy, the Service Provider should also submit the claim on a CD ROM in MS Excel format. The authorized signatory of the company should put his signature and seal of the company on the CD ROM Disc.

7.2.7 In addition, supporting documents as described below shall be submitted along with specific claims.

- a. District Commissioning Claim (Twenty percent claim): Self Certificate as per **Appendix F-I (A&B) to Annexure VII**.
- b. Service Area Commissioning Claim (Twenty percent claim): Certificate of Completion of Intra-District Wireless Broad Band Network from the DMA as per **Appendix (F-II) to Annexure VII**.

c. EQA claim:

First EQA Claim:

- a. Certificate of Commissioning of District as per **Appendix (F-II/F-III) to Annexure VII**, as applicable.

All EQA Claims:

- b. Statement of Continuation of Service Report as per **Appendix (F-IV) to Annexure VII**
- c. Network Availability Report as per **Appendix (F-V (A&B)) to Annexure VII**
- d. Subscriber MIS Statement as per **Appendix (F-VI) to Annexure VII**

7.2.8 The claims along with the supporting documents should be submitted at the respective Controller of Communication Account Office of the Circle.

7.2.9 The Subsidy Disbursement Schedule has been tabulated below:

Claim Type	Eligibility condition	Subsidy Formats and supporting documents
District Commissioning (20% of district subsidy)	Self Certification of commissioning of the network in the relevant district	<ul style="list-style-type: none"> • Claim format: Annexure-VII along with Attachment-I and II. • Self Certification by way of Appendices (FI-A and FI-B) to Annexure VII.
Service Area Commissioning (20% of entire Wireless Broad Band Network subsidy)	DMA certification of commissioning of entire Wire Less Broad Band Network	<ul style="list-style-type: none"> • Claim Formats: Annexure-VII along with Attachment-I • DMA Certificate in Appendix (F-II) to Annexure VII.
Equated Quarterly Subsidy (3% of District Subsidy)	<p>a.<u>First:</u> At the end of the quarter in which the Wireless Broad Band network of that district is commissioned (with the condition that no EQA claim may be lodged before the end of the ninth quarter from the date of signing of the Agreement).</p> <p>b.<u>Subsequent EQA claims:</u> at the end of the next quarter from the date of submission of the first EQA claim of the relevant district and so forth.</p>	<p>a. <u>First:</u></p> <ul style="list-style-type: none"> • Subsidy claim Format: Annexure-VII along with Attachment-I and III. • DMA certificate in Appendix (F-II) to Annexure VII if all district networks are commissioned (entire Intra-District OFC Network) and in Appendix (F-III) to Annexure VII in case of partial commissioning. • Appendices (F-IV to F-VI) to Annexure VII. <p>b. <u>Subsequent EQA claims:</u></p> <ul style="list-style-type: none"> • Subsidy claim Format: Annexure-VII along with Attachment-I and III. • Appendices (F-IV to F-VI) to Annexure VII

7.2.10 DEDUCTION OF SUBSIDY

In case of non-achievement of minimum post commissioning performance for a district in terms of network availability, covering all causes of downtime in a quarter as detailed in Clause 6.11 of Section 6, Operating Conditions of the tender document, a deduction of a percentage of the EQA subsidy shall be effected on pro-rata basis as detailed in Clause 6.11 of the Operating Conditions of the Tender document. Subsidy deduction for failure to cover stipulated minimum number of villages and shall also be effected in accordance with clause.....of Section VI Operating Conditions of Agreement.

7.3 PAYMENT OF SUBSIDY

7.3.1 Disbursement of subsidy shall be by cheque, through the office of the respective Controller of Communication Accounts of the Circle.

7.3.2 The aforesaid subsidy claim statements of each year shall be required to be audited by the auditors of the Service Provider appointed under **Section-224/Section-619 of the Companies Act, 1956**. The report of the Auditors should be in the prescribed form given in **Annexure-VII-1** to be filed with the Administrator or designated authority as specified within 7 (seven) calendar days of the date of signing of the audit report but not later than 30th September of the following year.

7.3.3 The district-wise subsidy shall be paid after making adjustments, if any, for the payments made in the previous period(s).

7.3.4 Final adjustment, if any in respect of excess or shortage in the subsidy disbursed shall be made in the following year based on the various subsidies claim statements duly certified by the auditors of the Service Provider.

7.3.5 In case the Service Provider is found to have claimed and received in excess of 10% of the subsidy due to them, the entire amount in excess shall be recovered along with an interest from the date of disbursement at the prime lending rate (PLR) of State Bank of India prevalent on the day the disbursement was made. The interest shall be compounded monthly and a part of the month shall be reckoned as a full month for the purposes of calculation of interest. (Month for this purpose shall be taken as an English calendar month). No further subsidy shall be disbursed until final adjustment of the excess payment.

7.3.6 No interest shall be payable for any short/late payment made to the Service Provider by the paying authority.

- 7.3.7 All the relevant records of the Service Provider shall be subject to such scrutiny as may be prescribed by the Administrator so as to facilitate independent verification of the subsidy claimed.
- 7.3.8 For the purpose of post payment audit of subsidy claims, the Controller of Communication Accounts offices shall conduct verification, monitoring and field inspections which shall include, inter alia, the examination of various documents installed facilities and equipment etc.
- 7.3.9 In order to ensure proper and correct verification of subsidy paid, the Administrator can modify, alter, or substitute and amend, if deemed necessary, whatever is stated herein.

7.4 BANK GUARANTEES

- 7.4.1 The Service Provider shall submit a Performance Bank Guarantee (PBG) to Administrator USOF in the prescribed proforma (**as per Annexure-III-7**) valid for one year for the work awarded to him in the concerned Service Area, from any scheduled bank in India. The amount of PBG shall be Rs. ----- (as detailed at Annexure ____). The PBG must be submitted within seven days of issue of letter of intent and before signing of the Agreement.
- 7.4.2 Initially, the PBG shall be valid for a period of one year. The Service Provider, on its own, shall extend the validity period of the PBG on similar terms at least one month prior to the day of its expiry without any demand or notice from the Administrator.
- 7.4.3 The PBG shall be kept valid for an extended period of six months beyond the period of Agreement or till finalization of accounts whichever is later. Any failure to do so, shall amount to violation of the terms of the Agreement and entitle the Administrator to en-cash the bank guarantee(s) and to convert it into a cash security without any reference to the Service Provider at its risk and cost. No interest or compensation whatsoever shall be payable by the Administrator on such encashment.
- 7.4.4 Without prejudice to its rights of any other remedy, Administrator may en-cash bank guarantee and forfeit the amount upon any failure of performance of the terms & conditions of the Agreement by the Service Provider.
- 7.4.5 PBG is not required from a Service Provider as long as the Govt. of India has 100% controlling stake in it.

7.5 MAINTENANCE OF RECORDS

- 7.5.1 The Administrator shall have the right to call for and Service Provider shall be obliged to maintain, supply and provide for examination the relevant books of accounts, measurement books, log books and any record(s) relating to it. The Service Provider shall also be required to supply and provide for examination any

other records that it maintains in respect of the business carried on to provide the service(s) under this Agreement at any time.

- 7.5.2 The Service Provider shall invariably preserve all accounting records and other records (electronic as well as hard copy) for a period of three years from the date of publishing of duly audited & approved accounts of the company and any dereliction thereof shall be treated as a material breach independent of any other breach, sufficient to give a cause for cancellation of the Agreement.
- 7.5.3 The relevant records of the Service Provider will be subject to such scrutiny as may be prescribed by the Administrator or TRAI so as to facilitate independent verification of the amount due to the Service Provider as subsidy from the USOF.

SECTION -VIII
TERMS OF FINANCIAL BID

- 8.1 The financial bid shall be submitted in a separate sealed envelope (marked **Sealed Cover-II**) along with the bids for Pre-Qualification vide Tender no. _____ DATED _____. This Financial offer by pre-qualified bidders shall be opened in the presence of bidders' representatives at the place and time as mentioned in **Section-: 3 General Conditions** of the Tender Document unless a modification is conveyed.
- 8.2 Financial Bid Form duly signed by authorized representative of Administrator USOF shall be supplied along with the Tender Document. Format of the Financial Bid Form is enclosed at **Annexure-VIII-1**. The bidder shall submit the bids clearly indicating the quote in the prescribed proforma against Benchmark of concerned Service Areas. A single rate of subsidy should be quoted for the Service Area which will be applicable for disbursement on percentage basis for the various districts as mentioned in the Financial Bid form.
- 8.3 The bidders shall note that the bid submitted by them is applicable for all the districts mentioned for the concerned Service Area in the tender document (**Annexure-I**) and not selectively for some districts.
- 8.4 **Annexure-III-5** contains a declaration from the bidder that he shall comply with all conditions of this document without any reservations. This must be signed by the duly authorized signatory of the bidder. The authority under which power to sign is granted to the authorized signatory must accompany the bid.
- 8.5 The bid shall be opened on the specified date and time (including extension, if any) in the presence of the representatives of bidders. While opening the bid, the name of the bidder and the bid amount quoted by the bidder in **Annexure-VIII-1** will be read out to the bidders who are present.
- 8.6 The Administrator reserves the right to enter into Agreement with the successful bidder.
- 8.7 PROCESS OF FINANCIAL BIDDING**
- 8.7.1 The bidding process has been structured as 'Single Stage Bidding Process'.
- 8.7.2 The bidders must quote a subsidy amount less than or equal to the amount specified for Benchmark for the whole Service Area as stated in the Financial Bid Form placed at **Annexure-VIII-1** of the tender document. Quotes higher than the Benchmark value for the subsidy shall not be treated as a valid bid and shall be summarily rejected. The Bidder adjudged as responsive in terms of Clauses of this section quoting the lowest subsidy, shall be declared as the successful bidder (the "Successful Bidder").

- 8.7.3 In case of a tie amongst two or more bidders in the initial round of the financial bidding for L1 position, all such bidders shall qualify for the next round of financial bidding and this process shall continue till the tie is resolved.
- 8.7.4 Withdrawal, backing out of their last quoted bid or not quoting the bid amount in successive rounds (in case of tie) shall result in disqualification of such bidder(s) and their EMBGs shall be forfeited.
- 8.7.5 In the event that the lowest Bidder withdraws or is not selected for any reason the Administrator reserves the right to cancel the tender.
- 8.7.6 The bidder of the final round (in case of tie) of financial bidding with the lowest subsidy offer will be declared successful bidder for signing of the Agreement. The rate quoted by the lowest bidder shall be the Representative Rate.
- 8.7.7 The signing of Agreement as a result of the bidding process will not be treated and taken as grant of fresh License under the Indian Telegraph Act, 1885.
- 8.7.8 If the Agreement is not signed with the Successful Bidder for whatsoever reason, the Administrator reserves the right to cancel the tender.

8.8 SIGNING OF THE AGREEMENT

- 8.8.1 The Successful bidder shall submit a Performance Bank Guarantee (PBG) (as per **Annexure-III-7** of Rs.....in accordance with Service Area Wise PBG indicated at Annexure.....as per Clause 7.4 of **Section. VII: Financial Conditions** of the Tender Document within seven days (7 days) from the date of issue of LOI and prior to signing of the Agreement. The Agreement will become effective from the date of signing of the Agreement. In case the successful bidder does not furnish the PBG within the given time, their EMBG shall be encashed and the amount forfeited. Such bidder shall be disqualified from participating in further bidding process and blacklisted for a period of three years.
- 8.8.2 No extension of time shall be given for submission of PBG. Non-submission of PBG will result in encashment of Earnest Money Bank Guarantee and its forfeiture.
- 8.8.3 The Successful Bidder shall be bound by the terms and conditions of the Agreement or any other instructions issued from time-to-time by the Administrator.
- 8.8.4 In case, the Successful Bidder withdraws from the Scheme after signing of the Agreement the Administrator shall en-cash the bank guarantee submitted by the

Successful Bidder and may offer the next lowest bidder to enter into Agreement with Administrator at the representative rates, so arrived at for the Scheme.

8.9 CONTACTS DURING BID EVALUATION

Bids shall be deemed to be under consideration immediately after they are opened and until such time the Administrator makes official intimation of award/ rejection to the bidders. While the Bids are under consideration, Bidders and/ or their representatives or other interested parties are advised to refrain from contacting by any means, the Administrator and/or employees/ representatives of the USOF Administration on matters related to the Bids under consideration.

SECTION -IX**DEFINITIONS****1. INTERPRETATION OF TERMS/ DEFINITIONS**

Unless the context otherwise requires, the different terms and expressions used shall have the meaning assigned to them in the following paragraphs:

- i) **ADMINISTRATOR** means the Administrator, Universal Service Obligation Fund in the Department of Telecommunications under Ministry of Communications & IT.
- ii) **AGREEMENT** shall mean the Agreement signed by the Universal Service Provider with the Administrator for setting up and management of wireless broadband network and provision of wireless broadband services related to Universal Service Obligation on the basis of the outcome of the bidding process.
- iii) **BASE STATION** means a fixed radio transmitter/receiver station, which provides a link between the fixed /nomadic/ mobile telephone station and Core network.
- iv) **BACKHAUL COMMUNICATION:** Transport of aggregate communication signals from Base Stations to the Core Network.
- v) **BENCHMARK** is the rate that shall form the upper ceiling for submission of bids. It will comprise of subsidy amount based on a percentage of the capital recovery annualized over the period of the Agreement.
- vi) **BROADBAND CONNECTION** means a data connection that is able to support various interactive services, **including Internet access** and has the capability of a minimum download speed of 512 kbps, up-gradable to 2 Mbps on demand.
- vii) **CELL** means a geographical area served by a base station for wireless telegraphy which is dedicated to transmitting or receiving messages which have been or are to be conveyed by telecommunication systems designed or adapted to, and capable of being used while in motion situated for the time being in that area.
- viii) **“CORE NETWORK”** means the switching/routing equipment installed as part of the network which performs all switching/routing functions of calls for providing various services under the scope of this Scheme.
- ix) **CAPITAL RECOVERY** means the aggregate of depreciation, interest on debt and return on equity on the capital cost.
- x) **CONTENTION RATIO** is defined as the number of users competing for the same bandwidth. It can also be defined as the number of subscribers sharing the same bandwidth capacity.
- xi) **COVERAGE OF BIDDING UNIT, DISTRICT, VILLAGE WITH WIRELESS BROADBAND AND SEAMLESS COVERAGE:**

- a) **Wireless broadband coverage of an entire bidding unit or Service Are** (limited to the specified districts indicated under this tender) means that wireless broadband services are available (including the actual commencement of the wireless broadband service provisioning to the subscribers, conforming to the specified specifications) in all the specified districts of the subject **bidding unit or Service Are** as indicated in this tender document.
- b) **Wireless broadband coverage of a district** means that wireless broadband services are available (including the actual commencement of the wireless broadband service provisioning to the subscribers conforming to the specified specifications) in all the specified villages of the subject district, as indicated in this tender document.
- c) **Wireless broadband coverage of a village** implies that deliverables, as defined in this tender, are available in the entire subject village, including in streets, fields, roads, highways, along with indoor coverage in residential areas/institutions, etc., as applicable. A village having 90% probability or more of wireless broadband coverage will be treated as covered.
- d) **Uncovered Village with wireless broadband coverage:** A village, having less than 90% probability of wireless broadband coverage, will be treated as **uncovered**.
- e) **Seamless coverage of the specified areas:** An area shall be deemed to have seamless coverage if wireless broadband service remains available while moving from one village to another, without any interruption in call session/ connection and disturbance.
- xii) **CUSTOMER PREMISES EQUIPMENT:** The equipment installed/resident at the subscriber premises for accessing wireless broadband service in the fixed mode for the purpose of this scheme.
- xiii) **DESIGNATED MONITORING AGENCIES** refers to the agencies authorized by the Administrator to carry out inspection of the records, claims and installations including physical verification in order to ensure compliance with conditions of the Agreement.
- xiv) **DISTRICT** means a district as per Census 2001.
- xv) **EFFECTIVE DATE** is the date on which this Agreement comes into effect.
- xvi) **FIXED WIRELESS BROADBAND ACCESS MODE** has the location of the end-user/subscriber termination and the network access point to be connected to the end-user/subscriber are fixed.
- xvii) **INTERNET:** Internet is a global information system that:
- is logically linked together by a globally unique address, based on Internet Protocol (IP) or its subsequent enhancements/upgradations;

- is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent enhancements/upgradations, and all other IP compatible protocols; and
- xviii) LICENSEE** means a registered Indian Company that has been awarded License to provide the service (CMTS / UASL/ISP Service), within the geographical boundaries of the specified Service Area.
- xix) LICENCE** for this tender means a License (CMTS / UASL/ISP Service), granted or having effect as if granted under the **Section-4 of the Indian Telegraph Act, 1885** and the **Indian Wireless Act, 1933**.
- xxi) MOBILE WIRELESS BROADBAND ACCESS MODE:** The location of the end-user /subscriber termination is mobile.
- xxii) NOMADIC WIRELESS BROADBAND ACCESS MODE:** The location of the end-user/subscriber termination may be in different places but it is stationary while in use.
- xxiii) QUALITY OF SERVICE”** is the main indicator of the performance of a telecommunication network (**Wireless Broadband in this case**) and of the degree to which such network conforms to the standards of such Quality of Service parameters as prescribed by TRAI Regulations for specified parameters
- xxiv) ROAMING** the ability of a user to access wireless broadband services in areas other than the one(s) where the user is subscribed.
- xxv) SEAMLESS SERVICE** will prevent users experiencing any service disruptions while maintaining mobility.
- xxvi) “SERVICE”** covers collection, carriage, transmission and delivery of wireless broadband services over USP’s network under this scheme in a licensed service area.
- xxvii) “SUBSCRIBER”** means any person or legal entity that avails the Wireless Broadband Service under this USOF Scheme from a USP.
- xxviii) LICENSED SERVICE AREA** means the territorial jurisdiction as specified under DoT Service License except the areas that may be notified to be excluded from time to time.
- xxix) SUBSIDY FROM UNIVERSAL SERVICE OBLIGATION FUND (USOF)** means the disbursements from USOF towards meeting the universal service obligations in terms of the Agreement.
- xxx) TRAI** means Telecom Regulatory Authority of India constituted under the TRAI Act, 1997 as amended from time to time.
- xxxi) UNIVERSAL SERVICE PROVIDER (USP)** means such entities like UASL/ CMTS/ISPs Licensees, which have entered into an Agreement with the Administrator for provision of specified Universal Service.

- xxxii) USO** means Universal Service Obligation as enunciated in Indian Telegraph (Amendment) Act, 2003, Indian Telegraph (Amendment) Ordinance, 2006 and the Rules framed there under.
- xxxiii) USO FUND** means the fund established under Indian Telegraph (Amendment) Act, 2003 and Rules framed there under.
- xxxiv) VILLAGE** means a village as per Census 2001
- xxxv) WIRELESS BROADBAND ACCESS:** End-user/ subscriber radio connection(s) to core networks, i.e. core broadband network . The *end-user* may be a single *user* or a *user* accessing the services on behalf of multiple *users*.
- xxxvi) WIRELESS BROADBAND CONNECTIONS** means the wireless broadband connections provided under this scheme.
- xxxvii) WIRELESS BROADBAND NETWORK** means the the network, comprising but not limited to, base stations , backhaul , routers, servers, switches, etc., to be set up for provision of wireless broadband services as per specifications, under this scheme.

