

Bharti Airtel Limited's response to Consultation Paper on "Implementation Model for BharatNet"

Preamble:

At the outset, we wish to place our sincere thanks for providing an opportunity to submit our views on this consultation paper. We sincerely hope that the present consultation process will culminate in forward-looking recommendations that would help the country to achieve the vision of 'Digital India' and 'Broadband for All'.

The socio-economic benefits of Internet penetration and digital inclusion are well acknowledged. According to a study by the World Bank indicates¹ that a 10% increase in broadband penetration yields an additional 1.21 percentage points of GDP growth for high-income economies and 1.38 percentage points for low & middle economies.

Despite being the 10th largest economy of the world in terms of GDP², India ranks³ 131st in fixed broadband penetration and 155th in mobile broadband penetration. This is way below than some of our neighboring countries like Bhutan and Sri Lanka. Thus, conscious efforts need to be directed towards addressing the critical and fundamental issues, which are preventing the proliferation of affordable broadband services in the country.

The Government of India has listed 'Digital India' as a national priority/objective with 'Broadband for All' as one of the most important pillars. To achieve this objective, we suggest the following:

- 1. Address fundamental issues to promote the broadband network:** The Government has envisaged 'BharatNet' as a programme to provide high-speed bandwidth; redefining the rural landscape with broadband coverage and reaching the 'unreached' on the information super-highway. Under 'BharatNet', the Government intends to lay OFC connecting all the 2,50,000 Gram Panchayats (GPs) of the country offering bandwidth of 100 Mbps to each GP. The Government's initiative, though well intended, has failed to achieve its targets so far. Furthermore, the progress of broadband seems to be linked only with the progress of BharatNet whereas this is a small part of the national broadband initiative.

We believe that there are several obstacles in the deployment of broadband networks. Some of the obstacles are;

- High Regulatory Levies to the tune of 13-14% (License Fee, USO levy and Spectrum Usage Charge) on Telecom Service Providers (TSPs);
- Exorbitant charges for Right of Way (RoW) & Tower installation
- Lower spectrum holdings per TSP;

¹ https://www.itu.int/ITU-D/treg/broadband/ITU-BB-Reports_Impact-of-Broadband-on-the-Economy.pdf

² <http://www.thehindubusinessline.com/news/in-terms-of-gdp-indias-economy-is-10th-biggest-world-bank/article6196736.ece>

³ <http://www.broadbandcommission.org/documents/reports/bb-annualreport2015.pdf>

- Fragmented & Interference prone spectrum;
- Non-availability of USO fund/financial incentives to TSPs for covering rural/unviable areas;
- Misspelled fear of Electromagnetic Field Radiations (EMF)

The liberal and forward-looking policies over these critical issues will be a catalyst in the provisioning of affordable services, attracting investments and creation of high-quality broadband network.

2. **Provide financial incentives to mobile operators for creating the broadband network:** The mobile industry in India has scaled dramatically over past few years to become one of the country's biggest success stories. With nearly a billion mobile subscribers, the Indian market is already the second largest in the world. India is already the third-largest smartphone market in the world. There were 185 million smartphone connections as of mid-2015, and further half a billion new connections will be added by 2020. Moreover, the number of individuals accessing the Internet over mobile devices has expanded from less than 100 million subscribers in 2010 to nearly 300 million at the end of June 2015. Therefore, mobile operators are best placed to replicate the success of **voice telephony** to **broadband** in a short span of time.

Currently, India has approximately 420 million rural mobile customers, which can easily be converted into broadband customers. However, a significant barrier for private TSPs to expand into rural areas and upgrade to wireless broadband is due to low revenue earned from these locations against the high cost of network deployment and spectrum. **Therefore, we request that mobile operators should be given financial incentives by way of a reduction in USO and SUC levy, if they offer wireless broadband in certain percentage of villages in a service area. This will not only accelerate wireless broadband network in rural areas, but will significantly improve the affordability of broadband services.**

3. **Wireless technology is a key to connect rural areas in the shortest time span:** The envisioned 'BharatNet' is a middle mile solution that lacks the provisioning of end-to-end bandwidth and/or last mile, which is critical for realizing the policy objectives of inclusive and universal access. BharatNet would only deliver critical services at the Panchayat level through Common Service Centers (CSC). Efficient and viable delivery of community services, however, would require extending this connectivity to the houses and other places such as school, village health centers.

Currently, each CSC⁴ caters to around six villages and nearly 30 percent of rural consumers have to travel more than 10Km to access the Internet at the nearest CSC. Many CSCs also suffer from inadequate power supply and Internet connectivity issues. **Therefore, any policy of the broadband network should equally emphasize 'last mile connectivity' which enables the provision of broadband services to end users.**

With over 997 million wireless consumers and a mere 26 million wire line consumers, it is obvious that wireless is going to be the driver of last mile broadband. Therefore, wireless networks should predominately be used as a last mile solution for offering broadband services to rural customers. Wireless network not only provides the ubiquitous mobile services to each user in rural/remote area, but it is affordable as compared to wire line broadband. Further, providing affordable access at the last mile will be critical for driving maximum/ utilization/off take of national optical fibre network. **We, therefore, suggest that the national optical fibre network should connect all existing mobile tower bases and new towers planned over next five years, enabling mobile operators to provide fast broadband services to customers in a cost-effective way.**

- 4. Collaborate with private operators for optimal use of broadband infrastructure:** Being a critical stakeholder, BBNL should closely work with TSPs. However, the current structure assumes TSPs to be available at the end of the chain (last mile) to deliver services that eventually might be missing. The current broadband plan has no linkage with the rollout plans of TSPs. Therefore, there would be numerous occasions where fibre is available in one area, but the TSP requires it in another area, leading to wastage of national resources and money.

Therefore, close coordination between the BBNL and TSPs is critical for providing last mile for the successful rollout of broadband plan. The fibre should ideally be deployed first in those areas where either demand is high or TSPs require it, and thereafter the same can be extended to other areas. This will immensely improve the commercial viability of BharatNet and will lead to better utilization of national broadband infrastructure.

We sincerely hope that while formulating its recommendations, TRAI will take a favorable view on the above-mentioned submissions.

⁴ https://www.kpmg.com/IN/en/IssuesAndInsights/ArticlesPublications/Documents/KPMG_CII_Broadband_Report_Final.pdf

Q.1 The “Report of the Committee on NOFN” has recommended three models and risks/advantages associated with these models. In your opinion what are the other challenges with these models?

Q.2 Do you think that these three models along with implementation strategy as indicated in the report would be able to deliver the project within the costs and time-line as envisaged in the report? If not, please elucidate.

Q.3 Do you think that alternate implementation strategy of BOOT model as discussed in the paper will be more suitable (in terms of cost, execution and quality of construction) for completing the project in time? If yes, please justify.

Airtel’s Response:

1. The progress of BharatNet project shows that we need to take multiple steps and adopt various options to accelerate the creation of broadband infrastructure in rural/unviable areas rather than relying on one option.
2. The success of mobile services in India has largely been driven by private TSPs. Therefore, TSPs especially mobile operators are best placed to meet the vision of ‘Digital India’ and ‘Broadband Highways’ with the support of progressive policies and USO fund. Furthermore, the private sector ability to execute and know-how will help in reducing the infrastructure cost, as witnessed in voice telephony.
3. Therefore, for accelerating the broadband penetration, we recommend the following options:

1. First option:

- Mobile operators should be incentivized to cover villages and provide the broadband in lieu of a reduction in their contribution of USO and SUC levy. We propose the following:

S. No.	Percentage of Villages to be covered by Wireless Broadband(*)	Reduction in USO levy by(*)	Reduction in SUC levy by(*)
1	2.5%	1%	1%
2	5%	2%	2%
3	7.5%	3%	3%
4	10%	4%	4%
5	12.5%	5%	5%

() These numbers are indicative and may vary depending upon the final scope of the plan.*

- The government may divide the whole circle into clusters of villages (district wise). One cluster (district wise) should not be given to two TSPs for claiming a reduction in USO and SUC levy.

- Preferably, the government and the Industry can mutually decide as to which operator would cover which particular cluster of villages (district wise). This will ensure that 3-4 different operators cover the whole circle.
- For selection of clusters (district wise), the Government may also consider TSP's existing subscriber base, network reach, 3G/4G spectrum holdings so as to ensure that TSP is able to provide wireless broadband in those clusters (district wise) in a shortest possible time.
- TSPs would claim subsidy once they cover the 'x' percentage of villages using 3G or 4G technology and such coverage is duly verified by the TERM Cell. This way the entire risk of building the network is transferred to TSPs against the future benefits of reduced USO and SUC levy.
- TSPs would provide bandwidth up to 10Mbps to village panchayat at TRAI prescribed tariffs.
- TSPs shall connect the BTS using OFC. However, to speed up the provision of broadband, they should be allowed to connect the BTS using microwave and other back haul media such as VSAT.
- Within three years of the claim in USO and SUC levy, the sites shall either continue to be connected through Microwave or shall be provisioned through other backhauls such as fibre, satellite, etc. to ensure adequate bandwidth (as defined) at the village panchayat level. The whole plan can be finalized based on the size/topography of each village/cluster of villages.
- The Government and TSPs can sign a MOU and TSPs can be asked to declare the list of villages along with the target date for coverage.
- The ownership of the fibre once built will always remain with the concerned TSP.
- TSPs should be given free RoW permissions in a similar way as has been given to BBNL.
- In order to enable quick and quality fiber build, TSPs would be required to build overhead fiber infrastructure, using existing electricity pole/power distribution towers. Therefore TSP should be given explicit permission to use such electricity poles/towers from the concerned authorities in advance.

The above option has the following advantages:

- **Instead of only laying fibre up to village panchayat under the BOOT model and without any visibility over the last mile, the proposed model will bring the 'last mile connectivity' to end users along with the middle mile.**
- **TSPs will claim the reduction in USO and SUC levy only after making the investment in broadband network. Therefore, only serious TSPs will create the broadband infrastructure in rural areas.**

2. **Second option:**

- The remaining villages (not covered in first option) shall be connected through fibre with direct financial support by the Government.
- Only TSPs should be entitled to participate in a fair and transparent manner for building this fibre network.
- The executing agency can provide adequate capacity to Government for its usage. Similarly, adequate capacity can be made available to other TSPs in a fair and transparent manner.
- Government should provide the viability gap funding for laying and operating the fibre.
- Since the last mile access to such areas would be expensive and commercially unviable, TSPs may also be given financial incentives to offer last mile solution.

4. We propose that under both the options:

- BSNL should be mandated to provide dark fibre to private TSPs on the cost basis from Block Headquarter to District Head Quarter wherever any TSP does not have its own network. This will not only generate more revenue for BSNL, but will also lead to better utilization of telecom infrastructure created through public money.
- Village Panchayats should provide free space to private TSPs for installation of a tower.
- TSPs should be given free RoW permissions in a similar way as has been provided to BBNL.
- The executing agency can buy dark fibre from existing operators on IRU basis to build end-to-end bandwidth.

5. We firmly believe that the implementation of both the options simultaneously will accelerate the creation of broadband networks as multiple operators/agencies will work together and cover a maximum number of villages in a short span of time.

Q.4 What are the advantages and challenges associated with the BOOT model?

Airtel's Response:

We believe that private TSPs should be entrusted the task of building the broadband network through financial incentives/grants and other progressive policies. Some advantages and challenges associated with the participation of private TSPs are as under:

Advantages

- Broadband network will be created by way of private sector financing, which will bring fresh capital in the country.
- The use of private know-how and ability of end to end execution will help in reducing the cost of broadband network, accelerate the development of broadband network, and improve operating efficiency.

- Private TSPs would bring the latest and most feasible technology in the project, which would improve the quality of the national telecom infrastructure.
- Private TSPs would adopt innovative business models, marketing strategies and multiple last mile technologies to encourage the usage of bandwidth among rural customers.
- Unlike 100% funding of BBNL by the Government, private sector will use their capital also. This will bring only serious partners/operators on board.
- Private TSPs would be able to plan last mile wireless connectivity along with fibre/backhaul.

Challenges:

- Private TSPs may not see a viable business case in many locations due to high infrastructure cost and low revenue potential despite the proposed incentives.
- Such villages would require going to BOOT model as proposed in Option-2.

Q.5 What should be the eligibility criteria for the executing agency so that conflict of interest can be avoided?

Airtel's Response:

- The eligibility criteria for the executing agency should be carefully decided so as to ensure that only serious players are included.
- The executing agency should have a Unified Licence and requisite experience in laying the fibre, handling the complex projects, minimum net worth, paid-up capital. It should have built and maintain a network of minimum size at least 5000KM of fibres.

Q.6 Should there be a cap on a number of States/ licensed service area to be bid by the executing agency?

Airtel's Response:

All TSPs should be allowed to bid for any service area without any cap.

Q.7 What measures are required to be taken to avoid monopolistic behavior of executing agency?

Airtel's Response:

- Due to intense competition and high level of infrastructure sharing, India has not witnessed any monopolistic behavior in the telecom sector. In fact, there are already existing commercial arrangement among TSPs to share the rolled out fibre and work collectively towards a nationwide broadband roll-out.
- Furthermore, we believe that the utilization of such fibre would be lower in the first few years due to lower demand from users and therefore, we do not foresee any possibility of monopolistic behavior.

- The Government may ensure that any TSP which builds the broadband infrastructure under the above-mentioned options, provides non-discriminatory access to all users – both to the Government and the private sector.

Q.8 What terms and conditions should be imposed on the executing agency so that it provides bandwidth/fibre in a fair, transparent and non-discriminatory manner?

Airtel's Response:

- The terms and conditions for selling the bandwidth should be fair and transparent for all buyers. The governance mechanism, including KPI/ SLA, tariffs, various fibre & bandwidth plans should be equally applicable for all buyers.
- The executing agency should follow 'must-provide' rule to avoid the denial of the bandwidth to any party.

Q.9 What flexibility should be given to the agency in terms of selection of route of laying optical fibre, construction, topology and deployment of technology?

Airtel's Response:

The executing agency should be provided adequate flexibility to select their route, construction, topology and deployment of technology until the agency is providing adequate capacity on fibre and meeting SLAs. Further, it should be allowed to cover any place en-route.

Q.10 What should be the methodology of funding the project? In case of VGF, what should be the method to determine the maximum value of VGF for each State/ service area and what should be the terms and conditions for making payments?

Q.11 What kind of fiscal incentive and disincentive be imposed on the agency for completing the project in time/early and delaying the project?

Airtel's Response:

- We sincerely believe that it would be premature to comment on the methodology of funding the whole project and to determine the maximum value of VGF as the same would vary from one service area to another.
- There might be numerous villages where the VGF would be 100% of the project cost as it is not financially viable for any executing agency to deliver the broadband.
- To bring only serious players, the qualification criterion should be stringent and only the operators running the fibre network of more than 5000KMs should be allowed to participate.

Q.12 What should be the tenure/period after which the ownership of the project should be transferred to the Government?

Airtel's Response:

In BOOT model, the ownership of the broadband infrastructure can remain with the executing agency for at least 20 years and further extendable for another 20 years as executing agency will have to make significant investments in building/upgrading the broadband network on regular basis.

Q 13 Do you think that some measures are to be put in place in case the executing agency earns windfall profits? How should windfall profits be defined?

Airtel's Response:

- Currently, it would be premature to comment on this.
- The Government may take an appropriate decision once such incidence comes to the notice.

Q.14 Whether there is a need to mandate the number of fibres to be offered as a dark fibre to other operators to ensure more than one operator is available for providing bandwidth at GP level?

Airtel's Response:

The Government may ensure that adequate capacity/ number of dark fibre is made available to both the Government and private users in a fair and transparent manner.

Q.15 What measures are required so that broadband services remain affordable to the public at large?

Airtel's Response:

- While network coverage is a key to making services available, the uptake of these services is affected by their cost. A report by TRAI⁵ shows that rural consumers spend considerably less than their urban counterparts on mobile services, mainly due to affordability issues.
- Data tariffs in India are among the lowest in the world, but a significant proportion of the population is unable to afford this for regular Internet use due to low disposable incomes. High taxation and regulatory levy is a significant barrier in improving the affordability of broadband services. Therefore, we recommend the following:
 - *To reduce the licence fees from present 8% to 6%*
 - *To reduce spectrum usage charge to 1%.*
 - *To reduce USO levy and/or not to charge USO levy until existing USO fund are fully utilized.*
 - *To provide a free right of way permission, as being followed in the case of BBNL*
 - *To keep reasonable reserve price for spectrum*
 - *To reduce overall taxation for the telecom sector*
 - *To incentivize rural rollouts through various financial grants*

⁵ Telecoms Sector in India: A Decadal Profile, TRAI, 2012

- *Though the telecom sector has been accorded infrastructure status, no benefits have been provided to the sector so far. Preference should be given to the telecom installations for Grid power at Industrial rates. Most of the states are providing power at commercial rates.*

Q.16 What safeguards are to be incorporated in the agreement entered between Government and executing agencies if RoW is not being granted to the executing agency in time?

Airtel's Response:

- Today, obtaining right of way permission has become a major hurdle in rolling out new telecom infrastructure, which requires laying of cables and thereby provisioning of advanced broadband services in a time-bound manner. For granting right of way permissions, local agencies levy exorbitant fees and sometimes seek a bank guarantee from telecom companies. It may be noted that due to expensive and time consuming RoW permissions, the rollout of fibre is slow even in urban areas. The policies and practices/procedures over the right of way need to be re-looked urgently especially when levying such an exorbitant fee for giving right of way is not in line with the prevalent policy/law.
- Section 7 of the Indian Telegraph Act 1885 does provide for the Center to **notify rules** for the conduct of telegraphs established, maintained or worked by the Government or **by persons licensed under this Act**. Section 7(2)(e) empowers the Central Government to **make rules** to lay down the **conditions** and restrictions subject to which any telegraph line, appliance or apparatus for telegraphic communications shall be **established, maintained, worked, repaired, transferred, shifted, withdrawn or disconnected**.
- Under the provisions of Section 4 of the Indian Telegraph Act, 1885, the Central Government enjoys an exclusive privilege to grant the license for telecom services to Government and private companies. Under the Section 19 B of the Indian Telegraph Act, 1885, the Central Government, vide notification dated 24.5.1999, has conferred the powers upon the duly authorized Licensee(s), licensed under Section 4 of the said Act, to **seek way-leave from any person, including public authority. Therefore, the Central Government has also transferred/parted away the exclusivity on the right of way to telecom companies by way of this notification.**
- The Central Government grant telecom licences to various companies only after the consideration of the payment of Entry Fee and License Fee. All rights, including the 'right of way' have been integrated in the licence itself and are provided for a consideration as fixed by the Central Government in the form of entry fee, licence fee, etc., Therefore, these rights shall be exercised by licensees without paying any fee to any external agency as the consideration for the same is already included in the licence. However, the local agencies in the absence of any clarity from the Central Government continue to disregard

the Indian Telegraph Act 1885 and other applicable laws and seek exorbitant charges from telecom companies.

- After grant of telecom licences, it is obligatory for Central Government to facilitate the right of way to telecom companies. In fact, the Central Government has taken such an initiative in the case of Bharat Broadband Networks Limited (BBNL) wherein the Central Government, BBNL and all State Governments have signed a MoU under which no right of way charges including reinstatement charges are being paid by BBNL to any Central and State agency.

Q.17 The success of BOOT Model depends on participation of private entities, which will encourage competition. What measures should be adopted to ensure large-scale participation by them?

Q.18 Please give your comments on any other related matter not covered above.

Airtel's response:

To ensure large-scale participation of private TSPs, we request TRAI to implement various suggestions made by us.