

Bharti Airtel Limited's Response to Consultation Paper No. 09/2010 dated 10th June 2010 on "National Broadband Plan"

1. What should be done to increase broadband demand? (Reference Para 2.23)

Bharti Airtel response:

- a. It is a well established fact that affordability of product/services has a direct bearing on its demand. In today's scenario, when the Broadband services can be rendered through wired as well as wireless medium, this cannot be denied that both these mediums demand a high capital investment. The high cost of wired medium is majorly attributable to ROW costs, copper and CPE costs. It is well accepted fact that wireless broadband could be the quickest way to increase the Broadband penetration, however given the high spectrum charges, the cost structure for BWA services could be very high, which may be prohibitive for the growth of broadband services in the country. The logical conclusion which can be derived is that there must be efforts to reduce various costs associated in providing broadband services.
- b. To increase the broadband penetration it is also important that the cost of operation is low, so as to enable the service providers to provide the broadband services at affordable prices. The phenomenal growth in mobile services is a testimony to this fact. Today the broadband service rates are comparatively high primarily on account of following major factors:
 - High Cost of operation and maintenance of a wire line network.
 - High cost of Network equipments especially the copper loops and OFC.
 - High cost of CPE.
 - RoW costs .
- c. Apart from re-emphasizing on lowering the cost of providing broadband services, we would like to recommend some other methods to improve broadband penetration viz.
 - Promote **lower cost availability** of internet access through policy initiatives such as tax holidays, availability of optical fibre, unbundling of copper, computer, CPE etc.
 - Provide **computer literacy** through sponsored high quality training facilities in clusters of habitats.
 - Increase the awareness about the local content and applications and the benefits arising out of the same by use of broadband.
 - Subsidizing the cost of CPE/PC.
 - Subsidy for Setting of Hot Spots in Public Places
 - Removal of License fee from the wireline connections.

**2. What, according to you, will improve the perceived utility of broadband among the masses?
(Reference Para 2.23)**

Bharti Airtel response:

There is plethora of facilities which can be provided to masses through the platform of Broadband. Apart from entertainment and lifestyle applications which will play a strong role in increasing urban penetration of Broadband, applications in various other fields like education, skill development, health and agriculture will go a long way in the proliferation of the Broadband in all consumer segments across the country. In our view, few major applications which can significantly improve the broadband footprint are:

- **E-Governance** : E-Governance is the use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. One of the main focus for government should be to drive e-governance project by establishing citizen centers so that each and every individual have access to all government information. The other items which would increase the penetration and utility of broadband are the computerization of land records, online issuances of ration cards, old age pension, citizen identity card etc.
- **E-health** : This facility enables specialist doctors to provide advice to general practitioners or nurses in rural and remote areas and can be utilised for 'distant diagnosis' directly with patients. Telemedicine can potentially provide health care workers with an extensive network of specialists from whom to get support and provide patients with improved medical attention no matter where they are located. The increased penetration of broadband would give a major boost to E-health/telemedicine.
- **E-education/E-learning** : Broadband has the capabilities to enable distance learning applications, which deliver optimum real-time audio and video in a simulated classroom environment. In addition to many public schools which are, or will be, connected via broadband networks, there is a growing commercial market for education services offered by private companies.
- **E-commerce**: It is expected that e commerce will enable companies to lower costs such as procurement, production, selling and distribution, which will lead to the development of new markets and services. So increase use of E-commerce would improve the perceived utility of broadband and hence the demand and growth of broadband.
- **Entertainment** : Entertainment is another area which may prove popular for broadband applications. For example, online games and video are often cited as potential areas for growth in broadband demand. It might be anticipated that consumers are likely to pay more for broadband connectivity when it is bundled with services.
- **Online Bill payment**: Another application, which is becoming popular in urban areas, is online bill payment of finance, insurance, telecommunications and other utilities like electricity Insurance premium etc.

- **Employment** : Internet driven by Broadband is used by all over country as platform wherein employer & prospective employee to come & share their respective offers. Hence, broadband is acting as a tool for generating new employment opportunity and bring jobs closer to un-employed people.
- **Social Networking**: Social networking is also becoming a big driver to increase the use of internet and the broadband usage.

3. What measures should be taken to enhance the availability of useful applications for broadband? (Reference Para 2.23)

Bharti Airtel response:

We would like to recommend the following:

- **Integration with government agencies/businesses**: - One of the biggest driver for the increased use of broadband is the online availability of government related transactions, information, applications etc
- **Government Portals**:- Allowing government policies, transactions like getting license & permissions, filling applications & dues, tender responses, e-bidding etc. would increase the demand of broadband exponentially.
- Online applications including real time entertainment, online banking, shopping, video-based job interviews e-transactions, e-learning's etc.

4. How can broadband be made more consumers friendly especially to those having limited knowledge of English and computer? (Reference Para 2.23)

Bharti Airtel response:

- a. Developing applications in local language and/or extensive use of graphics.
- b. Important Government websites should be available in the vernacular languages.
- c. Conducting training programmes on the use of computers and intelligent terminals.
- d. More User-friendly (voice recognition, touch screen, etc) CPEs at an affordable prices

5. Do you agree with projected broadband growth pattern and futuristic bandwidth requirements? (Reference Para 2.35)

Bharti Airtel response::

We agree that future planning has to be done on the basis of requirements of large bandwidths in the Access as well as backhaul networks. We predict even more broadband penetration and growth when the cost of broadband services would be lower.

6. Do you agree that existing telecom infrastructure is inadequate to support broadband demand? If so what actions has to be taken to create an infrastructure capable to support futuristic broadband? (Reference Para 2.35)

Bharti Airtel response:

- a. Yes, we agree that existing telecom infrastructure is inadequate to support broadband demand.
- b. It is highlighted that Government owned service providers – BSNL & MTNL have exhaustive infrastructure roll-out in the country covering almost all urban areas & major villages. At present these operators do not share their available infrastructure with private players. Therefore, best strategy for spreading broadband is to make use of available infrastructure by way of infrastructure sharing such as unbundling of copper, tower sharing etc.
- c. In light of the above, it is recommended that last mile copper should be unbundled and should be available to the operators on equal basis.

7. What network topology do you perceive to support high speed broadband using evolving wireless technologies? (Reference Para 3.22)

Bharti Airtel response:

The network topology of both wireline including optic fibre and wireless systems is equally capable of supporting the high speed broadband. In wireless systems the technologies currently available are 3G, Wi-Max etc. However, the high cost of 3G/BWA spectrum will hit the affordability of the wireless broadband services.

8. What actions are required to ensure optimal utilization of existing copper network used to provide wireline telephone connections? (Reference Para 3.22)

Bharti Airtel response:

It is recommended that:

- a. The private telecom operators should be allowed to share the copper cable laid down by the BSNL/MTNL and the same should be available at a wholesale price lower than the retail tariff.
- b. We also recommend that TRAI should regulate the wholesale tariff of the copper pairs made available by BSNL/MTNL and this price should be lower than retail tariff.

9. Do you see prominent role for fibre based technologies in access network in providing high speed broadband in next 5 years? What should be done to encourage such optical fibre to facilitate high speed broadband penetration? (Reference Para 3.22)

Bharti Airtel response::

The Optical fiber would play a key role in broadband penetration in two ways:

- a. **OFC as access network:** Due to high capacity, use of OFC in the access network would help in defining the high bandwidth to the end customer. Also, OFC has an advantage over both Copper and the wireless medium. While copper has bandwidth limitation, the wireless medium has the constraint in the form of inadequate spectrum.

Also, passive Optical Devices like GPON, GEPON will start playing a larger role in building smarter homes in Metro Cities in next couple of Years.

- b. **OFC in Back Bone Network:** Due to high bandwidth and low cost, the OFC is the most suitable technology for backbone network.

Further to encourage the optical fibre and to facilitate the high speed of penetration, we propose as follows:

- **Rationalization of RoW charges:** At present the RoW charge is significantly high and varies from city to city and the charges range from Rs 1 Lakh/km to as high as Rs 1 Crore/Km. So there is a need to have a national policy on RoW charges and the same should be limited to the actual expenditure for laying the cable and its restoration.
- To give a boost to the high speed connectivity in rural areas and small towns, the local bodies should waive off the RoW charges for OFC in those areas.
- The custom and the excise duty should be reduced to nil or Zero on import and manufacturing of OFC.
- At present the power supply to the various infrastructures being used by telecom and Internet operators providing mobile as well as broadband services is charged at the commercial rates. Since, the Broadband services contributes majorly in the growth of economy, it is suggested that the power should be supplied to all service providers at the same rate as it is supplied for agriculture sector.

10. What changes do you perceive in existing licensing and regulatory framework to encourage Cable TV operators to upgrade their networks to provide broadband? (Reference Para 3.22)

Bharti Airtel response:

As per the present ISP license, the operators are already permitted to use the last mile of cable operator to provide the broadband services. So we do not feel that there is a need to change any licensing conditions.

11. Is non-availability of optical fibre from districts/cities to villages one of the bottlenecks for effective backhaul connectivity and impacts roll out of broadband services in rural areas? (Reference Para 3.39)

And

12. If so, is there a need to create national optical fibre network extending upto villages? (Reference Para 3.39)

And

13. In order to create National optical fibre core network extending upto villages, do you think a specialized agency can leverage on various government schemes as discussed in para B? (Reference Para 3.39)

And

14. Among the various options discussed in Para 3.35 to 3.37, what framework do you suggest for National Fibre Agency for creating optical fibre network extending upto village level and why?

Bharti Airtel response:

- a. Due to low literacy rates and lesser knowledge of English in the rural areas, penetration of Internet is adversely hit and therefore, the content is to be converted to the vernacular language or to the graphical mode. It is also worthwhile mentioning that such internet content requires higher bandwidth (up to 3-4 Mbps) as compared to the urban customers' requirement.
- b. We feel that the optical fibre is the best way to cater to the high bandwidth demand, hence it is suggested that the optical fibre should be extended up to villages level.
- c. While extending the OFC to the villages, the planning should be done, keeping in mind the demand for:
 - Internet Usage
 - Providing Backhaul connectivity to 2G , 3G, Wi-Max and fixed line voice network and any other network capable of providing internet access.
 - Providing connectivity to the Government's projects like E- governance, etc.
 - The Access to the OFC should be provided to each operator on equitable basis.
 - KPI of the service providers to be in line with the Industry norms and strong penalty clauses for roll out and QoS should be imposed.
- d. In light of the above, it is strongly recommended that the nation wide OFC roll out plan should be approved by the Government as soon as possible.

15. What precautions should be taken while planning and executing such optical fibre network extending upto villages so that such networks can be used as national resource in future? What is suitable time frame to rollout such project? (Reference Para 3.39)

Bharti Airtel response:

The national optical fibre network should have the ability to offer adequate and reasonably priced access to bandwidth in the access as well as backhaul network to all operators in an equitable manner.

16. Is there a need to define fixed and mobile broadband separately? If yes, what should be important considerations for finalizing new definitions? (Reference Para 4.18)

Bharti Airtel response:

- a. For a customer, the broadband services whether delivered on wireline or wireless are substitutable and competitive products as long as these are able to deliver the desired throughput.
- b. Hence, in our view the broadband policy should be technology neutral and should not distinguish between various technologies.
- c. However, the cost of delivery in wireline and wireless networks are distinctly different. So, the policy should provide special incentive to the wireline /fixed line operator. These incentives may be in the form of no license fee and tax holiday for fixed line operators.

17. Is present broadband definition too conservative to support bandwidth intensive applications? If so, what should be the minimum speed of broadband connection? (Reference Para 4.18)

Bharti Airtel response:

- a. Yes, we believe that the current definition of broadband is too conservative and with the increased usage of bandwidth intensive applications, 256 Kbps is very conservative or meager.
- e. It has been acknowledged that the bandwidth requirement for future applications like online gaming, videos is between 3-4 Mbps bandwidth. Also to meet the national objective to improve the broadband usage in the rural areas, it is important to convert the internet content in to vernacular language and graphical form. It is also worthwhile mentioning that such internet content requires higher bandwidth (up to 2-3 Mbps) as compared to the urban customers' requirement.
- b. In light of the above, **it is recommended that the existing definition of broadband where the speed is 256 Kbps, should be replaced with at least 512 Kbps.** We believe that speed of 512 Kbps will not only improve the user experience of using broadband but it will also help in achieving the national target of 100 million connections by 2014.

18. What specific steps do you feel will ease grant of speedy ROW permission and ensure availability of ROW at affordable cost? (Reference Para 4.30)

Bharti Airtel response:

- a. The Telecom Operators have been assured the Right of Way (ROW) under Indian Telegraph Act, 1885 and as per the act, the charges that can be levied for granting RoW shall be limited to the restoration charges. However State governments are imposing very high RoW levies, which is increasing cost for laying down the fibre network. Since large part of the cost of deploying fibre networks is in form of RoW, there is a need to have appropriate and uniform National policy in place for ensuring access to right of way at reasonable prices.
- b. In addition, various municipalities and other State agencies have stipulated their own norms across the country for granting permission / access. State governments have started levying exorbitant charges not commensurate with restoration charges of the particular area. Such rates are often arbitrary and range from Rs1 lakh/- per km to Rs 1 crore/ per km. The imposition of such exorbitant RoW levies creates additional cost burden for the telecom service providers and delay the expansion of networks especially in the rural and remote areas.
- c. Further, in the absence of central government guidance, a number of states are treating the ROW charges as a source of revenue which is, resulting in additional costs to the service providers, the brunt of which is borne by the end consumers in the form of higher tariffs.
- d. In view of the above, we suggest that Union should bring out a uniform RoW policy and mandate all state governments to follow the same. These guidelines should lay down the principle for charging RoW, stipulate timelines for ROW approvals and specify common procedure across the country. These guidelines may also address the issue of the land conversion requirement for laying optical fibre connecting through the forest land for the purpose of telecom network.

19. Does the broadband sector lack competition? If so, how can competition be enhanced in broadband sector? (Reference Para 4.42)

Bharti Airtel response:

- a. We believe that there is enough competition in the market as the broadband services are today provided by various players using varied technologies such as DSL, ADSL, OFC, cable TV network, VSAT, and 3G respectively. The competition would further intensify after launch of 3G/BWA services.
- b. Hence, there is an adequate competition in the market and there is no need for any further intervention.

c. Further, we would like to suggest the following measures to enhance competition in broadband sector:

- Last Mile copper loop is a costly affair both in terms of cable, its laying cost as well as ROW cost. So, we believe that the copper loops laid by the incumbent operators i.e. BSNL/MTNL should be unbundled and should be available to all operators. Also such an unbundling should be at a competitive wholesale tariff so as the operators are able to provide the broadband services to the customer at a competitive tariffs.
- USO fund should subsidize the cost of optical fibre connecting the rural areas so that both 'broadband access' and 'high speed backbone network' is in place to serve the customers of rural areas.
- USO fund should also be provided to the service providers to subsidize the CPEs for broadband service.

20. Do you think high broadband usage charge is hindrance in growth of broadband? If yes, what steps do you suggest to make it more affordable? (Reference Para 4.42)

Bharti Airtel response:

- a. Yes, we believe that high cost of broadband usage is a big hindrance in the growth of broadband services.
- b. Further, we would like to suggest the following measures to make the broadband services more affordable:
- There should not be any license fee or spectrum usage charges for broadband.
 - Copper should be unbundled and should be available to all service providers on equitable basis.
 - Optical fibre connectivity should be available to reach the unconnected rural areas.
 - CPE should be made more affordable.
 - RoW charges to be rationalized and permissions and issues should be granted/resolved in a time bound manner.
 - There should be any license fee on the fixed line telephony. Also, we suggest no service tax on the use of broadband services.

21. Do you think simple and flat monthly broadband tariff plans will enhance broadband acceptability and usage? (Reference Para 4.42)

Bharti Airtel response:

The current regime of retail tariff being under forbearance has been very effective and worked very well as it allows the operators to introduce new innovative and affordable tariff plans, thereby offering multiple options to customer in the form of diverse tariff plans.

So, we believe that instead of simple and flat broadband tariff plans, there is a need to have affordable plans for broadband services.

We also urge the Authority to announce the policy initiatives which lead to reduction in the cost of provisioning of services and operation so as to enable operators to provide services at more affordable prices.

22. Should broadband tariff be regulated in view of low competition in this sector as present? (Reference Para 4.42)

AND

23. What should be the basis for calculation of tariff for broadband, if it is to be regulated? (Reference Para 4.42)

Bharti Airtel response:

- a. We believe that there is enough competition in the market as the broadband services are today provided by various players using technologies such as DSL, ADSL, OFC, cable TV network, VSAT, and 3G respectively.
- b. It is well accepted that there are more than 104 operators (including UASL, ISPs,) who are providing the broadband services. The competition will further enhance with the launch of 3G and BWA services.
- c. Also, the low broadband penetration is not due to the lack of competition but it is due to the lack of affordability to the customers and low investment by the operators due to lower return on capital.
- d. **In light of the above, it is reiterated that there is no need to regulate the broadband tariff and the broadband tariff should be left to the market forces.**

24. How can utilization of International Internet bandwidth be made more efficient in present situation? (Reference Para 4.42)

Bharti Airtel response:

- a. Currently, most of the content is hosted outside India and hence there is very high usage of International internet bandwidth. Therefore, it is suggested that more and more content should be brought to India which will bring down the cost of the content and will also improve the utilization efficiency.
- b. It is suggested that to encourage the hosting of content in India, Government should encourage the operators by way of providing power, land etc. at a lower cost. So as the cost of data centre is competitive with the international market.

25. How can use of domestic and international internet bandwidth be segregated? Will it have direct impact on broadband affordability? If so, quantify the likely impact. (Reference Para 4.42)

Bharti Airtel response:

- a. A majority of the content at present is international.
- b. The cost structure of the domestic and the international bandwidth is almost same. So , we do not agree to incur the extra cost in segregating the domestic and international bandwidth as this in turn would be passed on to the customers and is detrimental to Broadband affordability.

26. What steps should be taken to bring down the cost of international internet bandwidth in India? (Reference Para 4.48)

Bharti Airtel response:

- a. The cost of international internet broadband can only be brought down by hosting more and more content in India. So we reiterate our suggestion made against the question no. 24 & 25.
- b. We would also like to recommend the following steps to bring down the cost of international internet bandwidth in India:
 - **Reducing the cost of international internet bandwidth:** Such as IPLC, this can be achieved by reducing the license fee of ILDOs and giving the financial incentives for the under sea cable.
 - **Reducing the cost of hosting:** This can be done by reducing the cost of data centre in India. Such as free availability of land, power at subsidized rates, faster clearances and other fiscal benefits such as tax holidays.

27. How can competition be enhanced in the International bandwidth sector? (Reference Para 4.48)

Bharti Airtel response:

At present there are a large numbers of ILDOs selling international bandwidth. The tariffs are under forbearance and they have substantially come down during last 10 years. The limiting factor for the international bandwidth cost is the high cost of undersea cable system. With the exhaustion of the bandwidth/capacity of the existing cable system and high cost of the capacity in new cables, the financial incentive instead of any competition would help in reduction in tariff.

28. QoS of broadband, availability of bandwidth, adherence to given contention ratio, affordability, availability and spread are some intricately linked parameters. In your opinion what should be done to ensure good quality broadband to subscribers? (Reference Para 4.59)

Bharti Airtel response:

- a. In our opinion that the current QoS norms specified by TRAI wrt Broadband adequately covers all aspects of broadband performance and the benchmarks laid are stringent enough to provide valuable experience to the end user.
- b. There is no denying that the availability of sufficient bandwidth impacts quality of Broadband but there must be certain checks and balances in place to curb the misuse. As per the random data analysis, it has been deduced that almost 5% of the consumers use 80% of the bandwidth and therefore, the Authority may encourage certain policies and measures to ensure fair use of bandwidth among all users so that the genuine customers are not adversely impacted.

29. Do you think that bad quality of broadband connection is impacting the performance of bandwidth hungry applications and hence crippling the broadband growth? If so, please suggest remedial actions. (Reference Para 4.59)

Bharti Airtel response:

The current quality of broadband is not a hindrance rather; the high cost of hardware and high CAPEX in terms of ROW actually translates into a high entry cost and thus impacts the tariff of the broadband services. This not only acts as an entrant barrier but also makes the existing users to opt for higher bandwidth at a higher price. Hence, it is important for the broadband growth that , the various associated capex costs needs to be reduced and the benefit of the same should be passed on to the customers in the form of reduced tariffs and availability of higher bandwidth at cheaper rates.

30. Is there a need to define new/redefine existing quality of service parameters considering future bandwidth hungry applications, time sensitivity of applications and user expectation? What should be such parameters including their suggestive value and should such parameters be mandated? (Reference Para 4.59)

31. What measures do you propose to make Customer Premises Equipment affordable for common masses? Elaborate your reply giving various options. (Reference Para 4.64)

Bharti Airtel response:

- a. CPE cost which include modem and other devices like computer etc acts as a major entry barrier for increased demand for broadband services.
- b. We propose that financial relief such as tax benefits on laptops, notebooks or intelligent terminals having inbuilt CPE capable of being used for broadband access should be extended.
- c. Tax relief in terms of custom duty, excise duty should be considered in order to reduce the cost of CPE .
- d. We also propose the USO fund to launch the schemes to subsidise the broadband service providers to enable them to provide low cost CPE/computers.

32. What measures are required to encourage development of content in Indian vernacular languages? (Reference Para 4.68)

Bharti Airtel response:

- a. In order to ensure that rural population benefits from the provision of broadband service, it is important to have content and various applications in local language which the rural masses can understand and use.
- b. TRAI has noted that:

“The availability of relevant content in the vernacular language is a pre requisite for the growth of broadband and ICT with the rural masses, therefore apart from giving the subsidy to the infrastructure providers the content application providers should also be given incentives to develop the contents based on local requirements”.

TRAI Study Paper on Measures to Improve Telecom Penetration in Rural India,

16th December, 2008

- c. We believe that easy availability of broadband medium combined with localized content in regional language will significantly enhance the growth and usage of telecom /broadband service in rural areas and will bring to the rural masses the benefits of e-governance, e-health, e-education, and commercial applications in local languages.
- d. Research has also shown that having access to broadband services substantially improves the social and economic conditions of people living in rural areas by improving access to family, education, health & financial services & by enabling development of non-agricultural economic activity.
- e. In light of the above, we believe that application programmes in vernacular language through fiscal incentives including local and central tax benefits should be encouraged so as to meet the Government target of 100 million broadband subscribers by 2014.

33. Do you perceive need for any regulatory or licensing change to boost broadband penetration? (Reference Para 4.71)

Bharti Airtel response:

- a. We believe that ISP license is very flexible with zero license fees on pure internet services and has almost negligible entry fee.

- b. However, we propose that to have a level playing field, the license fee on internet /broadband services provided by UASL operators should also be reduced to zero i.e. they should be allowed to deduct the income on the account of pure internet services from their AGR.

34. Are there any specific competitions and market related issues that are hindering growth of broadband? (Reference Para 4.71)

No comments.

35. What other fiscal/non-fiscal measures should be considered to boost broadband penetration? (Reference Para 4.71)

Bharti Airtel response:

As stated in the answer to previous questions. We would like to reiterate the following fiscal and non fiscal benefits to be provided so as to improve the broadband penetration:

- Financial incentives should be provided to bring down the cost of
 - Operation of a wire line network.
 - Network equipments especially the copper loops and OFC.
 - Customer premises equipment (CPE). Tax relief in terms of custom duty, import duty should be considered in order to reduce the cost of CPE imported in the Country.
- USO fund should subsidize the cost of optical fibre connecting the rural areas so that both broadband access and high speed backbone network is in place to serve the customers of rural areas.
- Presently, the USO Fund has over Rs 14,000 Crores lying largely unutilized. This should be disbursed through simple and effective schemes to incentivize those operators in a time bound manner who are playing a vital role in expansion of telecom and broadband services in rural and remote areas. **We propose that the USO support should be technology neutral and shall be provided on the basis of the contribution made to the growth of broadband services in the rural areas.**
- More and more internet content should be hosted in India.
- Developing applications in local language and/or extensive use of graphics.
- Important Government websites should be available in the vernacular languages.
- Infrastructure support such as land, power supply etc should be provided to the operators engaged in roll out of telecom/broadband services in rural areas.
- DoT to frame a National Telecom Infrastructure Policy to speed up deployment of infrastructure in rural areas by laying down guidelines for RoW, land acquisition, availability of power supply at the rate similar to agriculture etc. desirable to make this policy into “National Telecom Infrastructure Act” .