

**Airtel's Response to TRAI's Consultation Paper on "Valuation and Reserve Price of Spectrum: 2100 MHz Band"**

At the outset, we would like to thank the Authority for initiating this consultation exercise for auctioning of spectrum in 2100 MHz band. 2100 MHz is a key enabler for the spread of mobile broadband services. The last auction of 2100 MHz was conducted in 2010, wherein none of the operators could secure pan India 2100 MHz spectrum. Since, then the Industry has repeatedly requested the Government to release more spectrum in the 2100 MHz band.

As a welcome step, in its previous recommendations, the Authority had asked the Government to release sufficient additional spectrum in all bands including 2100 MHz band. This will ensure fair and transparent auction as well as continuity of services of the existing operators whose initial term of the license is scheduled to expire in 2015-16. The authority also suggested conducting a simultaneous auction of spectrum in 800, 900, 1800 and 2100 MHz. This would enable the operators to take an informed decision.

As rightly recognized by the Authority, the 2100 MHz band is a globally harmonized band for provision of high speed data services and its adequate availability will be critical for meeting the National objectives of 'Digital India' and 'Broadband Highways'. In this context, we request the Authority to consider the following favorably while making recommendations:

1. **Availability of adequate spectrum:** In the previous auction of 2100 MHz spectrum, there was a significant supply constraint, with only 15 to 20 MHz of spectrum made available per LSA across 10 to 12 operators as well as potential new entrants. The Authority has itself acknowledged this fact that the 2010 auction was conducted in a supply constrained scenario which led to hyper-competitive bidding.

It is critical that the upcoming auction addresses this issue by offering sufficient quantities of spectrum in the 2100 MHz band in the upcoming auction.

2. **Reasonable reserve price of spectrum:** The reserve price of spectrum should be reasonable and realistic to enable the Industry to realize the true market value of spectrum. Moreover, the final price of spectrum should leave sufficient funds for investing in infrastructure and enable operators to provide affordable services. The last auction of 2100 MHz led to irrational bidding in a supply constrained environment. As a result, the final discovered price cannot be considered as a reference for determining the value/ reserve price of spectrum in 2100 MHz for the upcoming auction. Therefore, we propose that valuation of 2100 MHz spectrum be determined by factoring the technical efficiency ratio with reference to 1800 MHz band.
3. **Auction of interference free spectrum:** It is a reasonable expectation of the Industry that the spectrum being auctioned at any given point of time shall be interference free, so that operators are able to deploy network and provide interference free service across the circle. However, the Industry has witnessed the issue of heavy interference in 2100 MHz spectrum allocated to various operators during 2010 auction in the service areas of Punjab,

Gujarat, Jammu & Kashmir and Haryana. Airtel itself is facing heavy interference in 2100 MHz spectrum allocated to it in Jammu Region of Jammu & Kashmir service area and has been unable to launch services on 3G network despite paying auction determined price and having a ready network since 2011.

We, therefore, propose that the operators, who have interference prone spectrum in 2100 MHz, should be first allocated alternate spectrum from the pool of newly available 2100 MHz spectrum and then the remaining interference free spectrum be put for auction.

With the above brief submissions, our detailed responses to the questions raised in the consultation paper are as below:

**Q1. In the auction for 2100 MHz spectrum held in 2010, certain roll-out obligations were mandated for the successful bidders. Stakeholders are requested to suggest if any changes are required or whether the same roll-out obligations should be mandated in the forthcoming auction, along with justification.**

**Bharti Airtel's Response:**

In 2010, when the spectrum was auctioned in 2100 MHz band, the following roll out obligations was mandated in the NIA:

***"3.4.1 Roll-out obligations for 3G Spectrum***

*Metro service area*

*The licensee to whom the spectrum is assigned shall be required to provide required street level coverage using the 3G Spectrum in at least 90% of the service area within five years of the Effective Date.*

*Category A, B and C service areas*

*The licensee to whom the spectrum is assigned shall ensure that at least 50% of the District Headquarters ("DHQ") in the service area will be covered using the 3G Spectrum, out of which at least 15% of the DHQs should be rural Short Distance Charging Areas ("SDCA")<sup>6</sup>, within five years of the Effective Date. Further:*

- *the operator shall be permitted to cover any other town in a District in lieu of the DHQ;*
- *coverage of a DHQ/ town would mean that at least 90% of the area bounded by the municipal/ local body limits should get the required street level coverage;*
- *the DHQ shall be taken as on the Effective Date;*
- *the choice of DHQs/ towns to be covered and further expansion beyond 50% of DHQs/ towns shall lie with the operator."*

We believe that the same roll out obligations should be continued. Moreover, any operator, who has a block of 5 MHz in a service area (acquired during auction of 2010), and acquires few more blocks in the same service area in the upcoming auction should not have any additional roll out obligation except the one that it would have completed as a part of roll out obligations for the first block acquired during 2010.

Further, we would like to bring to your kind notice, that the TSTP for Roll-out testing has not been finalized even after 4 years of spectrum allocation. In fact, DoT has issued a provisional TSTP on 04.09.2012, wherein the industry has raised certain issues on implementation of the proposed TSTP. Specific concerns related to issues were also brought to the attention of DoT but are yet to be resolved. We, therefore, request that the rollout obligation period should commence prospectively from the date the final TSTP is issued by DoT.

**Q2. Whether a bidder should be allowed to bid for more than one block of spectrum, in case a sufficient quantum of spectrum (more than one block in LSA) is put to auction?**

**Bharti Airtel's Response:**

Yes, a bidder should be allowed to bid for more than one block of spectrum in 2100 MHz band in case more than one block of spectrum is put to auction. The spectrum in 2100 MHz band is primarily used for network deployment for high speed data, wherein large and contiguous spectrum will improve spectral efficiency. Keeping in view the present growth of wireless data consumption and overloading of presently deployed 3G networks in key metros, it is quite likely that the operators would require more spectrum to cater future demand.

In the auction for 2100 MHz band held in May 2010, a limit of 1 block per operator was mandated primarily due to spectrum being auctioned for first time in 2100 MHz band for deployment of 3G networks. Post May 2010 auctions, the country has witnessed the 2 rounds of auctions for spectrum in 900/ 1800 MHz band which can be used for deployment of any technologies such as 3G/ 4G. Moreover, no such limit in respect of quantum of spectrum was mandated in the auction for 1800 MHz/900 MHz band except that the maximum quantum of spectrum held by an entity post auction was limited by the overall spectrum caps in respect of total quantum of spectrum allocated in a LSA and a particular band.

Since the spectrum is technology neutral and can be used for deployment of any technology, it does not merit placing any artificial restrictions in terms of number of blocks only for 2100 MHz band which an operator can bid. **We therefore recommend that an operator may be allowed to bid to any number of blocks of spectrum with its total spectrum holding remaining under the overall spectrum cap of the 'total spectrum assigned' in all bands put together and spectrum cap within a given band in each service area.**

It is further submitted that as on date 3G networks are primarily deployed in the 2100 MHz band which has provision of carrier aggregation using DC-HSPA feature and has been deployed in 154 networks across the globe. This feature helps in providing higher downlink throughputs and better user experience. However, the key pre-requisite of the feature is to have contiguous carriers in 2100 MHz band. Considering the same, allocations of two or more carriers to operators across the globe have been made such that the carriers are contiguous in nature. This is also critical considering that there are no commercial devices in the market that can support DC-HSPA with discontinuous carrier allocations.

We therefore recommend the following:

- Provision for spectrum re-alignment with the existing allocations of 2100 MHz to have one contiguous allocation in 2100 MHz band, i.e., the second carrier allocation to an existing operator having spectrum in 2100 MHz band will be made contiguous with either the existing spot or the new spot
- Allocation of contiguous blocks in case the operators bids for more than one block of spectrum

**Q3. Whether the spectrum caps (of 50% of total spectrum in a band/ 25% of total spectrum assigned across bands) prescribed in recently held auctions in the 800/900/1800 MHz bands should also be prescribed for the upcoming auctions in the 2100 MHz band?**

**Bharti Airtel's Response:**

To promote consolidation in the telecom sector, the Government released the merger & acquisition guidelines under which mergers are allowed till the market share (subscriber and revenue) of merged entity is upto 60%. Currently, operators cannot hold more than 50% spectrum in a particular band and more than 25% of the total spectrum holdings in all bands together. The objective of placing this restriction is to ensure that a minimum of four mobile operators continue to operate in the cellular market. Since, it is highly unlikely and impractical to assume that all operators would maintain the same market share, the government relaxed market share limits for mergers and acquisitions by increasing the limit from 35% to 60%.

The larger operators would also need enormous amount of spectrum to meet national objectives of broadband highways, principally when data consumes more spectrum than voice. We therefore request the Authority to increase the cap for spectrum holdings from 50% to 60% for a particular spectrum band and from 25% to 30-35% of the total holdings in all bands together for the upcoming auctions.

It is also recommended that the same spectrum caps be made applicable across policies such as Merger and Acquisition, Spectrum Trading etc. Further, it is submitted that the spectrum caps should not include the shared spectrum as it does not increase the spectrum holdings of the operators involved.

**Q4. In case only one block of 5 MHz of spectrum in 2100 MHz is available in an LSA, should only those TSPs be allowed to participate who do not have 2100 MHz spectrum in that LSA at present?**

**Bharti Airtel's Response:**

It is not recommended to restrict any operator from bidding for spectrum in 2100 MHz band, even if only 1 block of the spectrum is available in any particular LSA. The above rule, if applicable will be unfair and unjust for the process of auctioning as well as for objective price

determination. Restricting any set of operators from bidding would actually lead to suppressing the demand resulting in lesser revenues to the exchequer. To reiterate, the only limiting factor that needs to be levied is of overall spectrum holding cap as suggested in Q No. 3.

We therefore recommend that the auction process should be open for all, irrespective of the quantum of spectrum made available.

**Q5. Should the indexed value of May 2010 auction determined prices of 2100 MHz spectrum be used as one possible valuation for 2100 MHz spectrum in the forthcoming auction? If not, why not? And, if yes, what rate should be adopted for the indexation?**

**Bharti Airtel's Response:**

May 2010 auction determined prices of 2100 MHz spectrum should not be used as the basis of determining the valuation of spectrum in 2014 due to the following reasons:

- **Overestimated perceived demand:** In 2010, the TSPs perceived a high demand for 3G services by the consumer. The industry believed that 3G services had a high revenue potential with a market mature enough for speedy uptake. However, the last few years have revealed that the demand perceived by the TSPs was grossly overestimated and resulted in disproportionate investments being made by existing TSPs for 3G/ BWA spectrum. The TSPs later were finding it difficult to recover these investments, primarily due to low penetration of 3G enabled handsets resulting in very slow adoption of 3G services by the consumers.
- **Demand Supply Gap:** The supply of spectrum in 2100 MHz band, for deployment of 3G networks, in May 2010 auction was constrained to only 3-4 blocks per circle as compared to high demand due to the presence of 10-12 TSPs in each circle. This gap became more acute as the existing TSPs were waiting for allocation of additional spectrum in the last few years to meet the growth of existing 2G services. Moreover, the Authority also recommended limiting the administrative 2G spectrum as per the prescribed limit i.e. 10 MHz for Delhi / Mumbai and 8 MHz for the remaining service areas.
- **Auction Process:** Flaws in the simultaneous ascending auction process requiring the operator to bid continuously in order to be assured a block of spectrum in a circle led to a steep rise in prices for certain circles.

The failure of November 2012 and March 2013 auctions, where the reserve price was derived basis the final price of 2100 MHz spectrum makes it amply clear that 2100 MHz spectrum prices were unrealistically high and therefore should not be used to determine the valuation of spectrum in 2014.

- Q6. Should the value of the 2100 MHz spectrum be derived on the basis of the value of the 1800 MHz spectrum using the technical efficiency factor (0.83) as discussed above?**  
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- Q7. Should the value of spectrum in the 2100 MHz band be estimated on the basis of the producer surplus model outlined above? Please provide your views on the assumptions made. Please support your response with justification, calculations and relevant data along with the results.**  
&
- Q8. Should the value of spectrum in the 2100 MHz band be estimated on the basis of the growth in data usage outlined above? Please provide your views on the assumptions made. Please support your response with justification, calculations and relevant data along with the results.**  
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- Q9. Would it be appropriate to value the 2100 MHz spectrum as the simple mean of the values arrived from different valuation approaches as discussed above? If no, please suggest with justification which single approach should be adopted to value the 2100 MHz spectrum?**

**Bharti Airtel's Response:**

In our view, the determined value of spectrum should not be too high as it leaves little funds to reinvest in the creation of the infrastructure. Additionally, unsold spectrum as a result of high prices will only result in loss to the exchequer. Therefore it is important that a balance is struck between ensuring a reasonable prices that is financially viable to the TSPs and maximizing the revenues to the exchequer.

As per the latest recommendations on "Valuation & Reserve price of spectrum: Licenses expiring in 2015-16", the Authority has applied all the methods to arrive at the average valuation for spectrum in 1800 MHz band, which we believe were finalized post due research and consultation by the Authority. Hence, the valuation of 1800 MHz contains the averaging of all the methods combined together.

We, therefore, recommend that the valuation of 2100 MHz be derived on the basis of the value of 1800 MHz spectrum using the technical efficiency factor of 0.83, as it will bring a fair valuation of 2100 MHz band.

- Q10. What should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum of 2100 MHz band?**

**Bharti Airtel's Response:**

The Authority has consistently adopted a ratio of 0.8 for arriving at the reserve price. We therefore recommend that reserve price should be fixed at 80% of the spectrum valuation.