

To: advmn@traigov.in

Respected Sir,

Kindly find attached herewith MTNL's comments as Annexure-I on the consultation paper on " Auction of Spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz bands" dated 20th August 2017. The hard copy of comments is being sent through Dak.

Best Regards
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Q.1 (a) In your opinion when should the next access spectrum auction be held?

(b) If the spectrum auction is held now, should the entire spectrum be put to auction or should it be done in phased manner i.e. auction for some of the bands be held now and for other bands later based on development of eco system etc?

Please give your response band wise and justify it.

Comment:

- (a) Next spectrum auction should be held in year 2019, when 5G technology is likely to be available for commercial launch in India.
- (b) As in the last auction for access spectrum which was held in October 2016, around 60% spectrum remained unsold and the spectrum acquired in the said auction is yet to be deployed fully. Moreover, the Telecom Industry is presently undergoing consolidation phase as some of TSPs have filed merger of their companies/licences while a few licensees have traded their entire spectrum holding and closed their services. Due to hyper competition, concerns have been expressed about the financial health of the sector, its revenue growth and the capability of the companies to meet their contractual commitments etc. So it is suggested that spectrum auction should be done in phased manner i.e. auction for some of the bands be held now and for other bands later based on development of eco system etc.
- i. 700 MHz- As there was no bid received in any of the LSAs in last auction in 2016. This should be auctioned later.
 - ii. 800 MHz- As 15 MHz was sold in 4 LSAs in last auction in 2016 & the remaining unsold 58.75 MHz spectrum in 19 LSAs is available for the forthcoming auction, this should be auctioned earlier.
 - iii. 900 MHz- There was no bid received in any of the LSAs in last auction in 2016. This may be auctioned in year 2019.
 - iv. 1800 MHz- As out of 221.6 MHz spectrum, 174.8 MHz spectrum was sold in 19 LSAs in last auctions in October 2016. As demand is huge for this band, remaining unsold spectrum can be auctioned on priority.
 - v. 2100 MHz- Out of 360 MHz spectrum, 85 MHz spectrum was sold in 12 LSAs in last auctions in October 2016. The remaining unsold 275 MHz spectrum in 21 LSAs should be auctioned on 2nd priority.
 - vi. 2300 MHz- At present, no vacant spectrum is available in this band.
 - vii. 2500 MHz- As out of 600 MHz spectrum, 370 MHz spectrum was sold in 20 LSAs in last auctions in October 2016. The remaining unsold 230 MHz spectrum in 12 LSAs should be auctioned on 3rd priority.
 - viii. 3300-3400 MHz- DoT mentioned that a case for harmonisation/vacation of this band is being initiated and it is expected that entire band will be made available for telecom services by the end of this year. So 100 MHz in all the 22 LSAs may be auctioned in year 2019.

- ix. 3400-3600 MHz- Out of the 200 MHz band available in this band, 25 MHz spectrum is identified for ISRO. So the remaining 175 MHz (3425 MHz - 3600 MHz) spectrum should be auctioned for 5G.

Q.2 Do you agree that in the upcoming auction, block sizes and minimum quantity for bidding in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz bands, be kept same as in the last auction? If not, what should be the band-wise block sizes? Please justify your response.

Comment: India is one of the few countries, selling spectrum in block size of 5 MHz. In rest of the world, it is 20 MHz. Keeping in view exponentially growing demand for Data services & consolidations taking place in Indian Telecom sector, minimum block size of 20 MHz is recommended for auction of spectrum in any band. Harmonization of spectrum improve spectrum efficiency reduce OPEX & CAPEX for operator, make available spare spectrum for Government to auction. Hence exercise for harmonization of spectrum in all band should be undertaken urgently.

Q.3 What should be optimal block sizes and minimum quantity for bidding in (a) 3300-3400 MHz and (b) 3400-3600 MHz bands, keeping in mind both the possibilities i.e. frequency arrangement could be FDD or TDD? Please justify your response.

Comment: The optimal block size should be of 20 MHz (paired)

Q.4 Do you think that the roll-out conditions for 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz stipulated in the last auctions held in October 2016 are appropriate? If no, what changes should be made in the roll out obligations for these bands?

Comment: Lenient approach should be adopted for rollout obligation for 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz and 2500 MHz.

Q.5 Should there be any rollout obligations in 3300-3400 MHz and 3400-3600 MHz bands? If yes, what should these be? Please justify your response.

Comment: Yes, there should also be a very lenient rollout obligations in 3300-3400 MHz and 3400-3600 MHz bands similar to what has been imposed on the other spectrum bands in last auction say 800/900/1800 MHz band i.e. covering 50% DHQs and 30% BHQs in phases.

Q.6 Is there a need to prescribe spectrum cap in bands 3300-3400 MHz and 3400-3600 MHz? What spectrum cap provisions should be kept for 3300-3400 MHz and 3400-3600 MHz spectrum bands? Should these bands be treated as same or separate bands for the purpose of calculation of spectrum cap?

Comment: Detail exercise is needed to check interference level in this band hence existing satellite communication before allocation of this spectrum to TSPs.

Intra-band spectrum cap and a band specific limit, say 75 MHz, should be imposed on the combined holding in 3300-3400 MHz and 3400-3600 MHz as this will ensure that atleast 4 TSPs get the spectrum in these bands.

These 3300-3400Mhz and 3400-3600MHz bands should be treated as same/one band for the purpose of calculation of spectrum cap.

Q.7 Whether the prices revealed of various spectrum bands in the October 2016 auction can be taken as the value of spectrum in the respective band for the forthcoming auction in the individual LSA? If yes, would it be appropriate to index it for the time gap since the auction held in October 2016. If indexation is to be done then at what rate?

Comment: Yes, the prices revealed of various spectrum bands in the October 2016 auction should be taken as the value of spectrum in the respective band for the forthcoming auction in the individual LSA.

It would not be appropriate to index it for the time gap since the auction held in October 2016. As only 9 months has passed since DoT has conducted the auction in October 2016. Hence, the variables and inputs (financial information) used in different approaches for valuation of spectrum would not have changed substantially.

Q.8 If the answer to above question is negative then, whether as per the practice adopted by TRAI in the previous valuation exercise, the valuation for respective spectrum bands be estimated on the basis of various valuation approaches/methodologies (Referred in Annexure 3.3) including those bands (in a LSA) for which no bids were received or spectrum was not offered for auction?

Comment: Yes, the valuation for respective spectrum bands should be estimated on the basis of various valuation approaches/methodologies (Referred in Annexure 3.3) including those bands (in a LSA) for which no bids were received or spectrum was not offered for auction.

Q.9 Whether the value of 700 MHz spectrum should be derived by relating it to value of other bands by using technical efficiency factor? If yes, with which spectrum band this band be related and what efficiency factor or formula should be used? Please justify your views with supporting documents.

Comment: Today data carrying capacity play important role than coverage. Due to capacity need, TSP has to install BTS nearby thus loosing advantage of coverage in lower frequency band. Capacity factor should also be taken into account while deciding reserve price.

Q.10 Else, what valuation approach should be adopted for the valuation of 700 MHz spectrum band? Please support your valuation approach with detailed methodology and related assumptions.

Comment: No comment.

Q.11 Whether the value of October 2016 auction determined prices be used as one possible valuation for 2300 MHz spectrum for the current valuation exercise? If yes, would it be appropriate to index it for the time gap since the auction held in October 2016? Please justify your response with supporting documents/ report(s), if any.

Comment: Yes, the value of October 2016 auction determined prices be used as one possible valuation for 2300 MHz spectrum for the current valuation exercise. It would not be appropriate to index it for the time gap since the auction held in October 2016. As only 9 months has passed since DoT has conducted the auction in October 2016. Hence, the variables and inputs (financial information) used in different approaches for valuation of spectrum would not have changed substantially.

Q.12 Whether the value of the 2300 MHz spectrum should be derived by relating it to the value of any other spectrum band by using technical efficiency factor? If yes, which band and what rate of efficiency factor should be used? If no, then which alternative method should be used for its valuation? Please justify your response with rationale and supporting documents.

Comment: No comment.

Q.13 Whether the valuation of the 2500 MHz spectrum should be equal to value of similarly placed spectrum band? If no, then which alternative method should be used for its valuation? Please justify your response with rationale and supporting documents /report(s)/ detailed methodology, if any.

Comment: Yes, the valuation of the 2500 MHz spectrum should be equal to value of similarly placed spectrum band as there is little data available with regard to revenue, investment and cost to form a basis for the valuation. Also a scan of the on-line information reveals that world-over 2500 MHz spectrum band is considered less valuable as compared to lower frequency bands as International bench marking of value / spectrum allocation price.

Q.14 Whether the valuation of the 3300-3400 MHz spectrum bands and 3400-3600 MHz spectrum bands should be derived from value of any other spectrum band by using technical efficiency factor? If yes, what rate of efficiency factor should be used? If no, then

which alternative method should be used for its valuation? Please justify your response with rationale and supporting documents.

Comment: No, the valuation of the 3300-3400 MHz spectrum bands and 3400-3600 MHz spectrum should be derived from the value of similarly placed spectrum band as there is little data available with regard to revenue, investment, cost, other financial and non-financial information pertaining to this band to form a basis for the valuation.

Q.15 Is there any other valuation approach than discussed above or any international auction experience/ approach that could be used for arriving at the valuation of spectrum for 700/800/900/1800/2100/2300/2500/3300-3400/3400-3600 MHz bands? Please support your suggestions with detailed methodology and related assumptions.

Comment: No comment.

Q.16 Whether value arrived at by using any single valuation approach for particular spectrum band should be taken as the appropriate value of that band? If yes, please suggest which single approach/ method should be used. Please justify your response.

Comment: No, single valuation approach for particular spectrum band should not be taken as the appropriate value of that band.

Q.17 In case your response to Q16 is negative, will it be appropriate to take the average valuation (simple mean) of the valuations obtained through the different approaches attempted for valuation of a particular spectrum band, as adopted by the Authority since September 2013 recommendations? Please justify your response.

Comment: Yes, it will be appropriate to take the average valuation (simple mean) of the valuations obtained through the different approaches attempted for valuation of a particular spectrum band, as adopted by the Authority since September 2013 recommendations as It cannot be deterministically decided that which one of the valuation approach would be the right approach in various approaches adopted by the Authority for the valuation of spectrum because each approach of valuation has certain merits and certain drawbacks. Further, it is also not certain that any of these values can actually materialise in the market place. It would be better to rely on a number of such approaches to arrive at a final reasonable valuation and then determine reserve price based on such valuation.

Q.18 Is it appropriate to recommend Reserve price as 80% of the value? If not, then what should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum in different spectrum bands and why?

Comment: Yes, it is appropriate to recommend Reserve price as 80% of the value as a high reserve price for spectrum is likely to reduce spectrum demand and it also reduces the opportunities for price discovery. This will also enhance the probability of the following –

- (i) to ensure the minimum amount that the owner of an item would get from the bid
- (ii) to enhance the opportunities for price discovery

Q.19 Whether the realized / auction determined prices achieved in the October 2016 auction for various spectrum bands can be taken as the reserve price in respective spectrum bands for the forthcoming auction? If yes, would it be appropriate to index it for the time gap since the auction held in October 2016? If yes, then at which rate the indexation should be done?

Comment: Yes, the realized / auction determined prices achieved in the October 2016 auction for various spectrum bands should be taken as the reserve price in respective spectrum bands for the forthcoming auction.

It would not be appropriate to index it for the time gap since the auction held in October 2016. As only 9 months has passed since DoT has conducted the auction in October 2016. Hence, the variables and inputs (financial information) used in different approaches for valuation of spectrum would not have changed substantially.