Aircel response to TRAI 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

Please find below our responses question-wise on the consultation paper

Q1. (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.

Timing of next auction:

Aircel's 900 MHz spectrum in Tamil Nadu service area is coming up for renewal in a year's time and it should be given an option to renew like all other operators. Conducting the auction is one way of reallocating the expiring spectrum.

Given the current financial condition of the industry, we understand TRAI's predicament regarding the timing of auction. If TRAI feels having an auction this year will not be beneficial to the industry, it must provide alternative ways for Aircel to continue its business using its 900 MHz spectrum.

Not having means to extend its spectrum holdings will seriously jeopardize Aircel's business continuity in one of its leadership circles which accounts for a significant share of Aircel's revenue. Losing this revenue will result in severe financial crisis for the company and could potentially draw the curtains for yet another operator in the telecom industry leading to reduced service options for subscribers, loss of jobs, and heavy losses to financial lenders and shareholders.

Aircel's Recommendation:

- Operators should be provided opportunity to regain the spectrum about to expire as well as gain additional spectrum at regular periodicity.
- In case TRAI recommends not having an auction this year, it should suggest / devise a method by which Aircel could renew its 900 MHz band spectrum in Tamil Nadu service area.

Aircel would thus emphasis and request for Authority's intervention to ensure that it is provided option for continuation of its business operations using the 900MHz it currently holds.

Spectrum to be auctioned: Aircel recommends that that entire spectrum unsold from the last auction should be put for auctions again. The treatment of new bands has been responded in question 15.

Q2. 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.

Q3. 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.

Block size and minimum quantity of bidding:

At the outset, we would like to address that the current spectrum licensing in terms of technology neutrality is a much welcome step as it enable innovations, with de-linking of technology from spectrum acquisition likely to enable exploration of new technology for spectrum bands currently perceived to be 3G or any other technology linked.

However, while the technology de-linking should be certainly encouraged for existent bands, this de-linking should not be associated with creation of 5MHz minimum blocks to which almost mandates enforced re-farming or de-association of spectrum bands with existent 2G technologies. Disallowing

acquisition of spectrum bands in block sizes of 0.2MHz + (usually associated with 2G technologies) and only encouraging acquisition in block size of 5MHz + (usually used in 3G/4G technologies) is essentially trying to actively mandate re-farming or de-association of spectrum bands with existent 2G technologies and thereby crowding out operators with high 2G based businesses. We would request that technology neutrality should be "real" neutrality in approach without mandatory crowding out of 2G technology.

Another aspect to be considered is the emergence of Spectrum sharing (and trading) as an enabler for creation of 5MHz blocks amongst operators, along with welcome steps taken towards spectrum harmonization. With Spectrum sharing (and/or trading), two operators can collaborate to bring chunks of lesser than 5MHz size together to provide 3G/4G services. This enabler is a substantial change from 2014/2015 auctions when precedent of creation of 5MHz blocks was set, and is a strong reason to move to next stage where 5MHz is not seen as an minimum spectrum block of choice.

- **700 MHz**: This spectrum band is suited for the 4G technology, and is ideal for the coverage layer formation. They should thus be auctioned in block size of 5 MHz and a minimum bid of 1 block.

- **800 MHz**: block size of 1.25 MHz with a minimum bid of 1 block for both new and existing operators. Since, spectrum sharing and trading guidelines are in place, there should not be any distinction between a new entrant and existing operator in this band.
  This would ensure consistency with trading guidelines also.

- **900 & 1800 MHz**: These two bands have been predominantly used for GSM technologies and should therefore be considered as one band. The block size in these bands should be 200 kHz with a minimum bid of 3 blocks for both existing and new entrants. Since these bands are used to deploy the same technology, holding of spectrum in any of these bands should be considered as existing operator for the other band, even if no spectrum is held in that band. It may be pertinent to note that spectrum in 900 MHz band in Bihar (4.6 MHz), Gujarat (3.0 MHz), UP East & West could still be attractive for an existing 1800 MHz GSM operator. It may be noted that the initial allotments of administrative spectrum in 900 MHz band was less than 5 MHz (4.4 MHz).

  It is submitted that block size of 0.2MHz would still enable acquisitions for broadband associated 3G/4G technologies as well as enable 2G technology. This would enable price discovery of 900/1800MHz bands in real sense with operators having possibility of deriving its value in terms of revenue surplus as well as producer surplus models for 2G.

  Further, the trading guidelines provide for acquisition of 0.2 MHz of 900MHz and 1800MHz. Thus, an operator is permitted to trade in blocks suitable for 2G, however the auctions presently permit only bidding in block size suitable for 3G/4G. Authority is requested to bring harmony to this, by means of recommending consistency in block size of 0.2MHz for both 900/1800MHz.

  Such a consistent approach to 1800MHz and 900MHz would be great support to the cause of "real" neutrality in approach without associated aspect of crowding out 2G.

- **2100MHz**: This spectrum band is supported for the 3G as well as 4G technologies, and is ideal for the 3G coverage as well 4G capacity layer. They should thus be auctioned in block size of 5 MHz and a minimum bid of 1 block.

- **2300 & 2500 MHz**: These spectrum bands are supported for the 4G technologies, ideal for the capacity layer formation. They should thus be auctioned in block size of 10 MHz and a minimum bid of 1 block, similar to the recommendation from the authority in the 2016 auctions.

- **3.3, 3.4-3.6 GHz**: The block size for these bands may be suggested only after finalization of the frequency arrangement – TDD or FDD. These bands may therefore be auctioned at a later time. In case auction for these bands is done now, flexibility to convert from one mode to another should be available later upon finalization of the frequency arrangement by DoT or development of ecosystem for a specific arrangement and block size should thus be conducive to this later conversion.

Q4. 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?

Q5. 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.

Rollout conditions:

- Timely network rollout has been quite an important aspect to ensure rollout of services in rural areas. However, as the rollout of services is already covered for entire urban, semi-urban, semi-rural and almost entire extent of rural settlements, separate rollout obligations for individual bands should not be prescribed any further. The rollout obligation should be linked to the provision of service up to currently mentioned coverage requirement using any of the spectrum band/technology by the licensee and not to any one particular band / technology.

- The rollout obligation similar to 2016 auctions, which while having spectrum band associated aspects recognised rollout provision via any band as being sufficient, should be prescribed for existing operators acquiring new spectrum or any new entrant with no spectrum held prior to the auctions, in order to maintain consistency of licensing norms.

- New and further roll out obligations should not be assigned, as the rollout of services by a financially beleaguered telecom industry has already covered entire urban, semi-urban, semi-rural and almost entire extent of rural settlements. Any further expansion of the rollout requirements to geographies as yet to be brought into coverage by any of the operators, including the state owned undertaking, should be left to business decisions regarding economic feasibility of extending the coverage to such geography.

- Another aspect linked to current suggestion of not creating further rollout obligations is linked to obligation of deposition of a fixed percentage of adjusted gross revenue for the Universal Service Obligations (USO). As the rollout of services is already covered for entire urban, semi-urban, semi-rural and almost entire extent of rural settlements, the USO related percentage should be lowered to recognise the completion of the underlying need and only funds necessary for the continued service costs for the sites in very remote locations should now be collected.

Q7. 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?

Q8. 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?

Q16. 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.

Q17. 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.

Q18. 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?

Q19. 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?

Valuation and reserve price of various spectrum bands:

- Value of spectrum depends on i) its availability (supply) and ii) need of operators (demand). As can be seen from auctions held between 2010 and 2015, the supply was constrained while demand remained high resulting in the price of spectrum increasing manifold. However, in 2016 when the situation reversed – abundant supply and reduced demand (due to high prices and reduced urgency to obtain spectrum), there were no takers for most of the spectrum bands auctioned – even those perceived as premium.

- The current financial stress caused due to hyper competition has forced most operators folding up or announcing mergers. It may be noted that a few operators have given away for almost no consideration their entire liberalized access spectrum acquired at high prices along with their wireless business. This clearly indicates that the value of spectrum is far lesser than previously valued by the Authority (in 2016).

  Since the auction works on SMRA model, a reserve price set at higher than realizable level results in non-participation or artificial floor with only marginal participation. This has been seen with non-bidding by participants in the 2016 auctions in many sub-GHz bands. Reserve price set at lower than realizable level would result in competitive bidding which would result in discovery of a market determined price. Even if the reserve price is set at much lower than realizable valuations that some operators could ascribe to it, the bidding would ensure that price rise would be reflective of the real valuation of the spectrum.

- Aircel therefore recommends that the reserve price of spectrum bands currently in use by operators (800, 900, 1800, 2100, 2300 & 2500 MHz) should be kept at 50% or lower of the last determined price in order to promote active participation and bidding.

Q9. 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.

Q10. 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.

Valuation of 700 MHz band:

- 700 MHz band has propagation characteristics close to that of 800 MHz band and 900 MHz bands. Unlike the 900 MHz band where migration to 3G is prominent, developments in both 700 and 800 MHz bands have been towards 4G technology. Also in case of 900 MHz bands, the pressure to renew had resulted in the spectrum being over-valued in many circles. It is therefore fair to equate valuation of 700 MHz band to 800 MHz band. The reserve price of the 700 MHz band should therefore be ~80% of the revised 800 MHz band value in order to enhance participation and promote competitive bidding from all operators. This would lead to scenarios of enhanced coverage of 4G services via the 700MHz based 4G networks. Such enablement of 4G coverage enhancement would be beneficial to the promotion of Digital India initiatives and bring more residents into 4G coverage net than available via other spectrum bands.

- **Thus, valuation of 700MHz has to be suitably reduced and perhaps aligned similar in value to revised valuation for 800MHz having similar propagation characteristics.**

Q11. 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.

Q12. 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.

Q13. 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.

Valuation of 2300 & 2500 MHz band:

- Aircel recommends that the reserve price of these spectrum bands be kept at 50% or lower of the last determined price in order to promote active participation and bidding.

Q14. 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.

Q15. 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.

Valuation of 3300 & 3500 MHz band:

- The ecosystem in these bands is under development and hence comparing it with any other band will be a futile exercise now. The authority should recommend postponing the auctions of 5G bands for a few more years when a more factual bidding from operators as well as reserve price recommendation from the authority is feasible.

---------- End of Document ----------