

RJIL/TRAI/2017-18/554

06th November 2017

To,
Sh. Syed Tausif Abbas
Advisor (NSL),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg, New Delhi 110002

Subject: Comments on Consultation Paper No. 10/2017 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 28.08.2017.

Dear Sir,

Please find enclosed herewith comments of Reliance Jio Infocomm Ltd. 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 28.08.2017, for your kind consideration.

Thanking You,
For Reliance Jio Infocomm Limited,


Kapoor Singh Guliani
Authorised Signatory



Enclosure: As above.

**RELIANCE JIO INFOCOMM LTD'S COMMENTS ON TRAI'S 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"
(Consultation Paper No 10/2017 Dated 28th August, 2017)**

General Comments:

1. At the outset, we thank the Authority for issuing this consultation paper to discuss the proposal for auction of spectrum and other related issues. We also acknowledge and thank the Authority and the Government for continuous efforts to make available sufficient access spectrum for auction over the last few years. These efforts need to be continued in right earnest to help launch newer technologies and meet the exponentially growing demand for telecommunication services.
2. In addition to the spectrum bands already being auctioned, the availability of spectrum in 3300-3400 MHz and 3400-3600 MHz bands will supplement these efforts. Further, as internationally these bands are being primarily considered as capacity bands with a supplementary role in coverage, this will be a timely intervention to support the industry to build capacity in order to meet the exponentially increasing demand for wireless data in the country. GSMA in its report¹ on C-Band mentioned the future use of this spectrum as:

"Increases in traffic demand forecast to occur over the next decade create the need for networks able to handle higher traffic capacity and capable of delivering good quality of service. One of the prime characteristics required of spectrum to meet this demand is the ability to support larger contiguous channels (i.e. 20 MHz channels). The ability to aggregate channels within the frequency range is also an important feature required for the delivery of high capacity services. The frequency range 3400-4200 MHz is a key band below 6 GHz that meets these requirements. It exhibits similar characteristic to other capacity bands such as 2.6 GHz and there is potentially a large amount of spectrum available even when incumbent service requirements have been considered. For example, it will be able to provide reasonable outside coverage and some penetration into buildings."

3. The Authority is aware that nation building initiatives like 'Digital India', 'Smart Cities' and 'Skill India' are geared towards a data centric nation brimming with data-enabled skilled work force to help India become a technology leader of the future. In this

¹ https://www.gsma.com/spectrum/wp-content/uploads/2015/10/GSMA_C-Band_Report.pdf



scenario we cannot stress enough on the role and importance of wireless data services.

Valuation of Spectrum and Reserve Price

4. Valuation of spectrum cannot only be a function of the past spectrum valuation or results of previous auctions but should also reflect the current market realities to optimally achieve the objectives of spectrum auction. Spectrum valuation should be done in such a manner that the bidding process leads to discovery of true market price while ensuring that all the available spectrum is put to optimum use. We need to utilize the available resources optimally to make digital services available to everyone at affordable tariffs.
5. We now have the opportunity of analysing auction trends over the last few years as spectrum auctions have been conducted almost every year in the current decade. The excess demand seen for new liberalised spectrum in 2010 has not been repeated in subsequent auctions. In fact, the only auction that came close to replicating the demand in 2010 was the auction held in 2015, where business continuity was also a factor.
6. Apart from this, spectrum auctions have seen limited demand, with there been occasions when none of the spectrum offered in an auction was sold. In fact in 2016 auction, only 41% of the total spectrum auctioned was sold and in many spectrum bands a considerable amount of spectrum was sold at reserve price or close to reserve price. While immediate priorities of telecom service providers may have been the reason for limited bidding for spectrum, it also raised the question of what is an appropriate price for the spectrum. It was widely believed that the high reserve price, at least in some of the spectrum bands, resulted in limited demand in these bands.
7. We believe that spectrum valuation is very circumstantial and different spectrum bands may have different value as per the circumstances for different prospective bidders. Thus the approach to spectrum valuation has to be flexible and it may be borne in mind that no single valuation concept can apply at all times. The Authority should also take in to consideration the concept of opportunity cost. In terms of spectrum, opportunity cost is extremely relevant as the spectrum valuation should always be lower than the cost of the most economically rational alternative, be it the cost of acquiring spectrum from competition at lower rates or installation of more towers.
8. It is not always advisable that the same reserve price, which was considered in the last auction, should be continued with. There have been instances in the past where due



to high reserve price of spectrum, there were no bidders and the said spectrum remained unsold. Subsequently, Government reduced the reserve price, which resulted in increase in auction participation and accordingly due to resultant competition, the spectrum was sold and the Government could get reasonably good revenue. A few examples are presented in the following table:

1800 MHz Band Spectrum Pricing (In Rs. Cr. per MHz)						
LSA	2012 Auctions		2013 Auction		2014 Auctions	
	RP	WP	RP	WP	RP	WP
Delhi	554	n/a	388	n/a	219	364
Karnataka	264	n/a	185	n/a	155	155
Mumbai	543	n/a	380	n/a	207	272
Rajasthan	54	n/a	38	n/a	26	26

RP - Reserve Price; WP - Winning Price

9. It is to be noted that spectrum valuation has changed considerably in the last 1-2 years, mainly due to the following reasons:
- (i) More efficient technologies like LTE and LTE advanced are now tested and available. Most of the operators have already adopted 4G LTE technologies. 5G technologies are also at anvil of launch. Therefore, due to use of efficient technologies, with the same quantity of spectrum, much higher data and voice can be served resulting in lesser demand for spectrum.
 - (ii) With the evolving 5G technologies and Internet of Things (IoT), the requirement is shifting towards lower latency networks like Optical Fiber, reducing the demand for spectrum.
 - (iii) With the recent merger activities and consolidation in the sector, in contrast to previous scenario, there are limited operators to provide telecom services. These existing operators already have significant amount of spectrum across all spectrum bands to provide services using advanced technologies. Due to simple economic principle of demand and supply, there is lesser demand and therefore spectrum valuation has come down.
 - (iv) It is pertinent to note that barring one large proposed merger, most of such activity has been around transfer of right to use spectrum. The recent consolidation of spectrum holding in the sector is indicative that many players are preferring non-auction mode to achieve their desired spectrum portfolios. Clearly there is an issue with the valuation of spectrum used in the auctions.



- (v) Many new spectrum bands are now ready for commercial deployment. These bands have large spectrum availability but the demand is negligible and therefore spectrum in these bands will command lower prices.
 - (vi) During the previous auctions, some of the licenses of existing TSPs were getting expired. Given that network costs are sunk costs (network already deployed) and that operators would like to have minimum disruption, this resulted in higher demand and therefore inflated spectrum prices. Presently no such constraints are there.
10. There seems to be growing realization that operators bid too aggressively for spectrum in previous auctions, because of the which their business case did not remain viable. Some of the operators have been seeking financial relief on the grounds that prevailing auction prices are too high and they are not able to service based on their business operations. Revenue growth is not in line with the spectrum prices paid by these operators.

Since operators / other stakeholders acknowledge that operators bid too aggressively in some of the previous auctions and those prices are not sustainable, it will not be consistent if the Authority or the Government still consider prescribing reserve prices equal to the prices discovered in those previous auctions.

11. Given that the Government is considering easing terms of payment of spectrum to provide relief to telecom service providers, it is apparent that the Government also believes that spectrum prices discovered in previous auctions may not be sustainable. In this backdrop, it is logical that the Authority also revisits the topic of spectrum valuation and appropriate reserve price in auction.
12. In view of the fundamental industry shifts as outlined above, reserve price adopted in a previous auction cannot be benchmarked and used again in the forthcoming auctions. There is requirement to enable efficient price discovery of the commercial value of spectrum and therefore reserve price should be decided in such a manner that there is greater participation in auction. It will be possible only when reserve price is not kept at artificially high level, which acts as barrier and discourages TSPs from participation in the auction.
13. It may also be noted that due to reduction in reserve price, there may not be any loss to the Government. Even if there is some reduction in final winning price as compared to previous auction, the rediscovered price will be reflective of current market price of that particular spectrum band and Government will receive license fee from that particular spectrum, which may have remained unsold and unused due to



unreasonable reserve price. There will also be the wider benefit from utilization of scarce natural resource. The optimum value of spectrum is derived from its usage rather than from the one time auction revenues. In fact this revenue generation should be balanced with the other aspects and related investments to get the maximum benefit for the consumers.

14. We submit that reasonable reserve price will allow more participants and allow the market to determine correct value of spectrum. Reasonable spectrum price is as important as the availability of sufficient spectrum for the growth of the sector.
15. Consequently, we feel that the valuation of spectrum needs to be revisited and the reserve price should be reduced and made 50% of the reserve price of the 2016 auction. This will allow free play of market forces and accordingly discover the real market value under the current circumstances. We submit that this will boost investment in the sector, help discover true value of spectrum and lead to higher long term revenue.
16. In any event, reserve price is only the starting price for an auction, and the final price is determined based on the actual demand and supply of spectrum. To the extent that there is sufficient demand for spectrum (which is likely if initial reserve price is kept reasonable), there is likelihood that true market value would be determined for the spectrum.

Spectrum Caps

17. We submit that to build substantial future capacities for data services, contiguity of spectrum and corresponding channel width play an important role. Further, majority of the spectrum currently available with all service providers is liberalized spectrum, which can be used to deploy any technology, however, as it is scattered over multiple spectrum bands it is leading to operational inefficiencies.
18. We further submit that the primary cause for this situation is the in-band spectrum cap policy currently in place. We bring to your attention that with technological evolution and the need of larger spectrum channels to deliver optimum capacities, this policy has lost its relevance. Given the technology neutral nature of all spectrum bands, there is no one spectrum band which gives substantial advantage over other. An operator with existing footprint in a band can take additional spectrum in that band providing additional capacity without any network capex. Benefits of increased network capex efficiency definitely help operators in bidding higher price for spectrum thereby increasing realisation for government.



19. We also reiterate our submission on the draft recommendation on “Ease of doing telecom business” and RJIL’s submissions vide its letter dated 27/10/2017 in response to TRAI’s letter dated 18/10/2017 regarding issues relating to Spectrum Cap. We, therefore, request the Authority to take the same under consideration before making any recommendations on the subject.

Roll Out Obligations

20. On the issue of Roll Out obligations for auctioned spectrum, we submit that the Authority should thoroughly reconsider relevance of this concept in the current era of auctioned spectrum. Whenever spectrum is auctioned, the underlying assumption is that the maximum economic value of the spectrum has to be derived, consequently it is expected that the successful bidder shall aspire to derive maximum value from spectrum by gainfully deploying it at the earliest. Therefore, the roll-out obligations should be removed forthwith and should be applicable only for a new entrant who has not adhered to any stipulated roll-out obligations for any spectrum band.

Timing of Auction

21. With respect to the timing of the auction, the Authority and the Government may devise spectrum auction schedule at their discretion. This schedule should however provide longer term visibility so that changes required for the future technological upgradation and to meet the growing demands of the consumers can be planned in advance. Further, sufficient time should be provided to operators to prepare optimally for auctions.

22. Summary

- 1. Valuation of spectrum may be reconsidered in view of the changed market realities. The Government should not be providing spectrum payment related relief on the one hand, while retaining the same spectrum price on the other. Reserve price should be reduced by 50% across all the spectrum bands.**
- 2. Valuation of the new spectrum bands may be carried out based on auction discovered price of the closest band with comparable characteristics, international benchmarks and spectral efficiency and propagation characteristics with justified discounting for device eco-system maturity as done internationally.**
- 3. In-band spectrum caps should be dispensed with.**



4. Roll-out obligations should be applicable only for a completely new entrant who has no record of meeting coverage requirements in any spectrum band and needs to ensure coverage.
5. The Authority and the Government may devise spectrum auction schedule at their discretion, while providing forward looking spectrum availability road-map.

Issue wise response:

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.

Response:

1. The Department of Telecommunications has been following a clear and well defined policy of putting to auction all available spectrum from time to time. This policy has been instrumental in making sufficient spectrum available to all service providers, roll out latest technologies and would also pave the way for early and timely roll out of newer technologies in future.
2. We submit that this is a prudent policy decision and will help ensure complete certainty, transparency and policy stability. This policy and the entire gamut of spectrum related policy decisions like liberalization, spectrum trading and sharing etc. will help service providers plan their spectrum deployment as per their own projections and business case needs.
3. Considering the above objectives, statistics like how much spectrum was sold in a previous exercise and how much of the same has been deployed may not play a crucial part in the timing of a subsequent auction exercise and the reasons for such phenomenon may be sought in spectrum pricing.
4. The Authority may strive to supplement this policy with exact timeframe of future spectrum availability. Because, in case the actual spectrum availability is not available



well in advance, or at least at the time of spectrum auction consultation then this policy will not meet the stated objective of helping service providers plan and strategize their spectrum requirement and deployment. In fact DoT may be persuaded to provide a forward looking timeframe of availability of spectrum in various bands for next 10 years.

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.

Response:

1. We submit that the block size and minimum quantity to bid in a spectrum band have been decided after much consideration and deliberation and have worked well so far. No extraneous circumstances warrant a review of the same at present and therefore these should continue as in 2016 auction.

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.

Response:

1. The Authority has noted in the Consultation paper that although both TDD and FDD specifications have been defined by 3GPP in these bands, however it appears that the international momentum is towards TDD system.
2. Further, it seems that these bands will be most useful for deployment of 5G technologies. Given these bands are likely to be capacity bands, wider spectrum channel may be more suitable.
3. As the optimum block sizes are not derivable at the current point of time, it would be better to provide sufficient flexibility to the spectrum users. International regulators like Ofcom in U.K. had proposed a 5 MHz block. However considering the result of a few international auctions in this band and momentum towards TDD systems, we recommend a 10 MHz block size, with an assurance on contiguity of the spectrum in case a bidder opts to acquire multiple blocks.



4. This will not only provide a marginally wider channel in a single block but it would also provide flexibility to the prospective bidders. The Authority and the Government can always review the block sizes as per the emerging requirements.

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?

And

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.

Response:

1. We reiterate our previous submissions that roll-out obligations have no relevance in the era of auctioned spectrum. The service providers' investments in the highly valuable commercial spectrum are sufficient motivation for a gainful and early deployment of the spectrum and there should not be any extraneous and binding roll-out obligations.
2. However, if the Authority continues to favour mandatory roll-out obligations, then these should be simplified and made forward looking. In case a service provider has already completed the roll-out obligations in any one of the allotted spectrum bands in a particular service area, then the roll-out obligations should not apply on the service provider for spectrum acquired in any other spectrum band.
3. The roll-out obligations should be applicable on only a completely new entrant to a service area as a new entrant needs to ensure sufficient coverage initially. In this context, we submit that the roll-out obligations prescribed under the NIA for 2016 auction may be continued without any change.
4. The new spectrum bands being put to auction are largely under-deployed spectrum bands internationally with nascent device ecosystem. Further, there is an increasing thought process to treat the spectrum in these bands more for capacity augmentation than to meet coverage requirements, therefore it would be prudent to not prescribe any mandatory roll-out obligations for these bands. However, in case a new entrant with no spectrum holdings in any other band opts for spectrum in these bands then



the roll-out obligations similar to the roll-out obligations for spectrum in 2300 MHz band may be prescribed.

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?

Response:

1. With liberalisation of spectrum, the intra-band spectrum caps have lost their relevance. The Authority may bear in mind that in the pre-spectrum liberalisation era, spectrum allocation was based on the technology to be deployed for a particular spectrum band and the intra-band spectrum cap served the purpose of curbing market concentration in a particular band, however the auctioned spectrum is technology neutral and post liberalisation of spectrum, it can be used to deploy any technology, therefore the intra-band spectrum caps have now become redundant.
2. Further, the new technologies are increasingly spectrum neutral and can operate across any of the spectrum bands. The risk of market concentration is therefore lesser as operators can offer the same services across different spectrum bands.
3. Intra band spectrum caps in fact constrain the service providers from deriving efficiencies by having to deploy a technology on multiple spectrum bands, as is being experienced with the prevailing in band caps. Currently, the service providers are forced to opt for multiple bands owing to limited availability of spectrum in specific bands, thereby denying the benefits of higher quantum of spectrum for mobile broadband services in terms of enhanced spectral efficiencies. The loss of efficiency is quite substantial due to the narrow spectrum channels available in most bands.
4. Another major objective of spectrum caps is to maintain a minimum level of competition in the markets. Indian market is already hyper-competitive thus that purpose is self-served by the markets and regulatory interventions are not warranted. Further the overall spectrum cap of 25% of the total spectrum may be continued to guard against any adverse market consolidation leading to monopolies. Such a cap will ensure that there would be at least 4 operators in any market, and in fact in most cases, there would be more than 4 operators, thereby ensuring adequate competition. Once such competition has been ensured, operators should be allowed the flexibility to develop own spectrum portfolio across spectrum bands to meet their requirements.



5. In view of the above the intra-band spectrum caps should be completely done away with for not only the spectrum in the new bands proposed for auction but for all existing spectrum bands.

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?

And

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?

And

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.

And

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.

Response:

1. Please refer to our General Comments at the beginning of this document. Considering recent developments in the industry, growing realisation that operators bid unrealistically high prices for some of the spectrum, role of reserve price in an auction, need to optimally utilise available spectrum and market dynamics, the Authority must consider a reduction in the reserve price for the forthcoming auctions. We have already discussed the merits of lower reserve price, with respect to generating more



demand for spectrum and generating greater economic benefit for the eco-system. Our suggestion is that the Authority could consider reserve price at 50% of the reserve price in the previous auction (or 50% of the estimated value in cases where no spectrum was put up for auction).

2. The Authority had undertaken detailed valuation exercise in the past and therefore revising the various valuation methodologies may not be required at this point.
3. We submit that the current policy of treating the auction discovered price as the valuation of spectrum for one year immediately post auction may be reviewed in face of the continued phenomenon of unsold spectrum and operators opting to augment their spectrum holdings by non-auction route (spectrum trading and M&A). The Authority should bear in mind that too high reserve prices will prevent discovery of real market price from being discovered, and lead to unsold spectrum or distress purchase at reserve price without any competitive bidding.
4. It will also not be consistent with the recognition that operators bid unreasonably high prices for spectrum in recent auctions which has lead the Government to intervene and consider easing the payment terms for spectrum acquired in previous auctions.
5. Our above suggestion of reducing reserve price to 50% of last reserve price will obviate the need of indexation or applying any complex methods to derive the value of spectrum and would simplify the process of auction. The Authority should also bear in mind that the lower reserve price would also incentivize new entrants in the market.

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.

And

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.

And



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.

Response:

1. We reiterate our submissions to above question and submit that while the auction discovered price remains the most important criteria for valuation of spectrum, however the reserve price of spectrum may be kept at 50% of the last reserve 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.

Response:

1. Internationally the valuation of spectrum in 3.4 GHz has generally been treated closer to the spectrum in 2.3 GHz band due to certain inherent similarities like propagation characteristics and suitability for TDD etc.
2. Further, as both financial and non-financial information are not available in the case of 3300-3400 MHz and 3400-3600 MHz spectrum bands, it would be prudent to index the valuation to a similar spectrum band with minor adjustments for the state of device eco-system development.
3. We submit that the market obtained value of spectrum in 2300 MHz band and 2500 MHz bands would be the closest approximation to the value of spectrum for 3300-3400 MHz and 3400-3600 MHz spectrum bands. The Authority may consider these valuations with certain discounting for the nascent device eco-system for these bands as done by other international regulators.



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.

And

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.

And

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.

Response:

1. We submit that in view of the regular spectrum auctions and regular spectrum valuation exercise, there is no need of any new valuation approach. Further, the most preferential valuation approach remains the market discovered value of the spectrum.
2. All the other methods used by the Authority to determine intrinsic value, however these are relevant only when evaluating a previously not auctioned spectrum with relatively different spectral and propagation characteristics. In such scenarios, 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 would be appropriate.
3. However, as mentioned in previous responses the reserve price should be kept at 50% of the last reserve price of a spectrum or that of spectrum valuation where the auction discovered price is not available.



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?

Response:

1. We reiterate our submission to the previous questions that the spectrum valuation needs to be revisited owing to the market realities and the reserve price of the spectrum needs to be reduced.

