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EBG Federation 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

EBG Federation (EBG) was established on 11th March, 2015 as a Section 8 company under the Companies Act 2013 in order to ensure long term stability and clarity on its purpose as a not for profit organization offering support and advocacy for European businesses in India. Founded as the European Business Group (EBG), in 1997, as a joint initiative of the European Commission and the European Business Community in India, EBG has come to be recognized by the Indian Government and the European Commission as the industry advocacy group representing the interest of European companies in India.

EBG Federation is supported by the Delegation of the European Union to India and represents the 27 Member States of the European Union, UK as well as accession countries and its partners in European Economic Area (EEA). The EU Ambassador is our Patron. Currently EBGF has Chapters in Delhi, Mumbai, Bangalore and Chennai with approximately 170 companies as Members including a number of companies from the Telecom Sector. Mr. TV Ramachandran is currently the Chairman of the Telecom Sector Committee of the EBGF.

The primary objective of EBGF is to actively support growth in India-EU trade relations, become the most relevant advocate for European business in India and ensure that the needs of European business are well presented to policy and decision makers.

EBF Federation responses are as follows:

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.

Ans 1(a) Keeping in view the considerable learnings from the previous auctions, conventional wisdom makes us look at how much revenue comes in. we say that this may not be true as idle spectrum does not give any benefits to economic growth or to the consumer. Leading bodies such as World Bank and London School of Economics have stressed this point as well as ICRIER in India.

Spectrum is a natural resource, deployment of which will accrue more benefits for the exchequer in the long term than would the short-term gain of revenues from an auction. Given the limited funds available in the Indian system, if auction final prices are too high,



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then, they suck out most of the funds leaving naught for network roll-out and the common man suffers.

In the October 2016 auctions where a total of 2350MHz in seven bands were put up for auction in 22 circles, only 964MHz, or barely 41%, got sold. Even taking all the six e-auctions held since 2010 together, only about 60% has been sold. Even for the spectrum that was sold, the price realized could not be considered the market clearing price. The average sale price was hardly 5% above the reserve price, i.e. there was hardly any market discovered price in India.

There is a need to balance the socio-economic benefits over revenue maximization and change the auction design before any new auction is announced. It is an ideal time with NTP2018 being formalized, to relook at the policy's governing the auctions.

The conditions under which spectrum management and competition problems have been addressed have so far referred to an environment in which mobile use and spectrum demands have been dominated by voice traffic. This environment is now changing under the impact of demands for new mobile broadband services and the advent of new broadband wireless technologies designed to meet these demands as efficiently as possible. These new broadband technologies also offer improvements in meeting demands for voice services.

Overall spectrum caps were introduced in the 1990s in several countries, notably in the Americas, to help ensure the development of effective competition in mobile markets. They limited and in some countries still limit the amount of spectrum any one operator can hold in order to ensure that several operators can enter the market, since no single operator or even a duopoly can acquire all the bandwidth that is made available at the time of awards, thereby precluding entry by other competitors.

It is very questionable whether the future mobile market can support a number of financially viable operators that comes close to ten, even though it may be larger than three or four. The number of facilities-based operators that can operate profitably in a market is limited by the large capital requirements for deploying a nationwide network, even if these are mitigated by significant facilities sharing among competitors, as well as by the combined impact of market fragmentation on the revenue side and techno-economic inefficiencies on the cost side as this number increases.

Currently the market is consolidating with a number of mergers and acquisitions taking place. There is also the question of the financial straits of the telecom sector recognised by government which implemented a review by the IMG. It is important, therefore, to allow the market to consolidate and to allow for stability.



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As on date, India is far below the global better averages where spectrum holding by operators is concerned. In fact, we have far less than what is required to meet the IT dream.

Issues which need to be relooked at for the future success of the auctions are (1) pricing: success of an auction is reflected in the quantum of spectrum sold. The 2016 auction saw majority of spectrum unsold with 700MHz totally unsold and even for the spectrum that was sold, the price realized could not be considered the market clearing price. (2) Spectrum User Charges: Once the spectrum has been won in an auction, enlightened regimes merely cover the cost of administering and regulating the spectrum, which would only be a small fraction of 1%. Hence, it is recommended that, for auction-allocated spectrum, the SUC level should be brought down to max 1%.. (3) Contiguous blocks: to ensure efficient utilization of spectrum and better user experience, DoT may plan for ensuring availability of spectrum blocks for allowing contiguity and augmentation of the current spectrum holdings by operators.

Ideally, once NTP 2018 has been formalized and published wherein, the auction design has been suitably modified, auctions should be held late 2018 to early 2019.

Secondly, for question 1b, all available spectrum should be auctioned together. There are crores worth of spectrum lying idle from previous auctions which should be made available and utilised by the operators as idle this spectrum is a loss to the exchequer.

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.

Ans 2 Yes – same as last auction.



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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.

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?

Ans 6: Caps were useful in a period when there were a large number of operators – up to ten or more – which were needed to satisfy total likely demand in a geographic service area or country, in comparison to today's typical number of 3-4 major mobile networks in a national market. Having a large number of operators represents a market structure that is unlikely to be economically sustainable in the near future.

Any spectrum cap should facilitate an outcome where all mobile operators may reasonably be able to claim necessary spectrum holdings in a particular band to deliver viable mobile communication services.

Annexure 2.1 of the Consultation draws attention to the European Commission decision to use these frequencies for MBB applications and more specifically for 5G services having high potential for the new technology services.

There is strong momentum for TDD systems in this band. In May 2014, the European Commission adopted Decision 2014/276/EU11 which stated that the preferred duplex mode of operation in the 3400- 3600 MHz sub-band shall be Time Division Duplex (TDD). TDD may be preferable to FDD mode as the centre gap of FDD will reduce spectrum availability as indicated in Chart 2.1 of the consultation.

Blocks are being assigned in contiguous manner worldwide to ensure harmonisation from word go in this fresh bandwidth. harmonised frequency arrangement facilitates economies of scale resulting in the availability of affordable equipment's. Accordingly, multiple consecutive blocks of 20Mhz (TDD) size may be purchased by each operator through auction process.

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?



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Ans 4: When spectrum is allocated through market driven auctions, full market value for spectrum has been extracted by the Government through an open market process and there is no justification for any roll out obligations. Therefore, no roll out obligations should be specified and the market forces should determine the rollout.

Rollout obligations should be reasonable and should be comparable to global norms.

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.

Ans 5: The market is in the process of consolidating currently with the fallout of new entrant, new technology introduction and subsequent tariff rationalization. The new entities are strengthening their positions with these M&A's to face the requirements for national rollout of future services. With market forces driving competition and data being the new driving force , there may be no need to mandate any rollout obligation on these bands especially as these bands will be used for data and 5G connectivity.

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?

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?

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.

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.



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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.

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.

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.

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.

Answers for 7,8,11,12,13,15,16,17:

First and foremost, as stated in previous answers that idle spectrum is a loss to the exchequer, unsold spectrum in various bands should be valued at 50% of previous reserve price in 2016. Idle spectrum in the long run serves no purpose. For idle spectrum lying with operators – periodic audits need to be run to ensure that spectrum is optimally utilised.

The value/market price of the spectrum discovered in October 2016 auctions can be taken as the value of spectrum in 800, 900, 1800, 2100, 2300 and 2500MHz bands for the forthcoming auction in the respective LSA if the recommendations are issued by the Authority by December 2017 and auction is conducted by the Government of India by March 2019.

We are of the view that there is no need to index the value of the spectrum for the time gap between the auction held in October 2016 and forthcoming auction as the prices were already high in the October 2016 auction. Keeping in view the financial constraints of the telecom sector, price points may be rationalized and not increased to ensure funds are available for rapid deployment and rollout of networks post the auction. This would have a much more beneficial and desirable positive ripple effect on the entire economy.



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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.

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.

Ans 9 & 10: When timing the auction of any spectrum band, it is important to balance the need for the spectrum with the development of the local ecosystem of network and devices for that band. Not taking the ecosystem evolution into account can lead to underutilization of the spectrum and to blocking of funds by operators which could have otherwise been spent on expanding network deployment. Opening of 700 MHz band will additionally lock a lot of investments in buying the spectrum and this could become a limiting factor in network rollout including expansion of the existing 3G and 4G network.

Before opening further bands, it is important for the 4G services to flourish in the already allocated bands. 700MHz shall be option only when all the other bands have been completely allocated and there are further capacity needs required by subscribers.

It will take time for the 700 MHz market to mature and provide affordable devices in this spectrum range for the subscribers. Under these circumstances, any untimely auction of spectrum in 700 MHz band may accrue revenue to the Government, but the commercial exploitation of such scarce resource for the larger interest of the society may be permanently impaired if the operators are forced to bid for such auction ahead of its commercial viability.

It is thus important for the Authority to first conduct an eco-system development study for this band as well as an interference study (with Defence as well as Broadcasting) before the auction of this band.

The Authority may also keep in mind the experience and learnings from the 2300MHz and also the last auction when 700 MHz was put for sale but found no buyers, while deciding on the auction of 700MHz.

In terms of propagation characteristics, 700 MHz band is similar to 800 MHz and thus, the value of the band should be derived from the value of 800 MHz band. There is a long



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way to go before the eco-system in this band is fully developed like other commercial bands.

Keeping in view the fact that the valuation of any spectrum band is a function of the development of the eco-system in that particular band, the value of 700 MHz band should not be more than 50% of the value of the 800 MHz band. In circles, where the auction/market value for 800 MHz band is unavailable, 50% of the value of 900 MHz band can be used at arriving at the valuation.

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.

Ans 14: (Request Members to comment)

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?

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?

Ans 18 & 19: There is a need to set reserve prices at levels that are high enough to keep non-serious bidders at bay, but low enough to achieve vibrant price discovery. There needs to be a meaningful correlation across bands based on factors such as efficiency, coverage and the existing ecosystem. Every failed auction results in missed opportunity for the economy, lower investor interest in the industry, revenue loss to the exchequer and inefficient allocation of spectrum and therefore sensible reserve prices are important.

In the past, TRAI has fixed reserve price at 80% of valuation. We suggest the reserve price of the all the spectrum bands (Except 700MHz, 3.3-3.4 GHz & 3.4-3.6 GHz) be fixed at 80% of valuation.



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In case of 700 MHz, we suggest a more conservative approach and suggest a ratio of not more than 70% of estimated valuation, to ensure active participation in the auction. For 3.3-3.4 GHz & 3.4-3.6 GHz, we submit that the reserve price may be fixed at 50% of the valuation.