



ITU-APT Foundation of India

No. ITU-APT/09/2014/006 Dt. September 9, 2014

To Shri Arvind Kumar
Advisor (Networks, Spectrum and Licensing)
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawaharlal Nehru Marg
New Delhi - 110002

Subject: Response to TRAI Consultation Paper No. 10/2014 on Valuation and Reserve Price of Spectrum: Licenses expiring in 2015–16

Dear Sir,

On the outset we would like to take the opportunity to introduce the ITU-APT Foundation of India (IAFI) as a non profit, non-political society working for the last 9 years in India. The society is registered with the Registrar of Societies, Government of Karnataka, Bangalore and also a Sector Member in the ITU Development Sector (ITU-D) and Telecommunication Standardization Sector (ITU-T). Our membership includes corporate, associates and professionals in the field of telecom, IT and broadcast in both government and private sector in India.

The prime objective of the Foundation is the active involvement of telecom private sector in the activities of the International Telecommunication Union (ITU), a specialized agency of the United Nations, and the Asia Pacific Telecommunity (APT),

The Foundation has representation in the National Preparatory Council and Working Group for ITU meeting and WTDSA, TDAG, WRC etc.

ITU-APT Foundation of India is pleased to respond to the TRAI consultation paper on Valuation and Reserve Price of Spectrum: Licenses expiring in 2015–16. The observations as under:

Background



ITU-APT Foundation of India

At the outset, we would like to welcome this consultation paper on “Valuation and reserve price of spectrum: License expiring in 2015-16” which has raised certain important industry issues. ITU-APT is happy to provide its inputs on such important issues.

General:

It is submitted that Spectrum is a critical resource for mobile networks and the issue of its ‘availability’ at the ‘right price’ is central to the growth of services in the country. Clearly the right price will not be discovered if supply is strangulated and demand is coercively created by requiring existing licensees to re-acquire the spectrum at extension.

The next phase of telecom revolution is the broadband/ data/ internet. Wireless broadband can help expeditious roll out in most parts of the country. Telecom operators can play their rightful role in this national effort, if appropriate (contiguous) spectrum is available to them for new technologies; Hence, during spectrum auctions, it is essential that adequate amount of contiguous spectrum is made available to allow introduction of new technologies and services, which would allow faster roll out of wireless broadband. Also, the availability of adequate amount of spectrum at reasonable price is essential for making services available to public at affordable tariffs.

We believe that the reserve price of spectrum should be reasonable and not too high and the amount of spectrum made available for auction should be adequate to avoid ‘artificial scarcity’ and unreasonably high bids, which the sector may not be able to absorb without raising tariffs, in order to maintain the quality of services. The market would determine the right price in different LSAs.

It is submitted that larger availability of contiguous spectrum for auction may be possible, if the licenses of all operators in a particular LSA are extended/ renewed together, which may need these licences to be made co-terminus.

Due to different time frame for extension/ renewal of licenses of some operators, either the licences expiring in 2015 – 2016 could be extended, up to the time of renewal of all/ most licensees in a particular



ITU-APT Foundation of India

LSA, or by pre-poning the renewal of other licences. If the licences expiring now need to be extended, some appropriate administrative price of spectrum can be charged for the intervening period. Once all the operators are due for renewal/ extension at the same time, it would facilitate larger availability of spectrum as well as avoid multiple auctions.

The Authority has rightfully recognized and recorded the Government decision of 15 February 2012, which confirmed extension of licenses along with a prescribed limit of spectrum or existing allocated spectrum, whichever is less, requiring spectrum only beyond the said limit to be acquired in the open market. We believe that this decision should be honoured and the licenses should be extended along with spectrum at least upto the prescribed limit. The terms and conditions of such extension, including the price for spectrum upto the prescribed limit, may be recommended by the Authority as a part of this consultation.

We believe it essential that the approach adopted by the Government should ensure continuity of service as well as maintain fairness and level playing field among all the licensees.

ISSUE WISE SUBMISSIONS

Q.1. Please comment on the issue of making available additional spectrum in contiguous form (as discussed in para 2.5 and 2.13) in the 900 MHz and 1800 MHz band.

ITU-APT Foundation Response

It is well recognized that fragmented spectrum results in its inefficient utilization and thus creates an avoidable scarcity. It is also worth taking into account that the next telecom revolution is likely to be driven by the widespread adoption of wireless broadband, which requires availability of contiguous spectrum. Hence, the broadband revolution is critically dependent on availability of adequate, contiguous spectrum. In case of spectrum shortage, further fragmentation of spectrum between large numbers of players is likely to result in inefficient use of this scarce resource. However, while contiguous spectrum is desirable, practical situation may make assignment of spectrum in non-contiguous or partial lots inescapable.



ITU-APT Foundation of India

We agree with the view of TRAI regarding additional spectrum in 900 MHz band (Para 2.5) for auction.

There is a pressing need to improve the supply/ amount of spectrum. Some countries have allowed almost complete spectrum in contiguous form for commercial use. Hence, much larger amount of spectrum has been assigned / made available to each of their operators, enhancing quality of service, throughput and hence consumer productivity and wellbeing

We suggest that contiguous spectrum should be made available to telecom service providers in a manner and quantity so that there should be positive impact on quality of services and the prices should also remain affordable.

Also, the auction of spectrum in 800, 900, 1800 and 2100 MHz bands should be done concurrently and not sequentially.

Q.2. Please comment whether only contiguous blocks of minimum 5 MHz spectrum should be put for auction.

ITU-APT Foundation Response

It is most desirable to make available contiguous blocks for auction. Some measures in this regard have been proposed in 'General' section of our submission. However, in some circles, if contiguous blocks are not feasible even after reconfiguration/ rationalization of spectrum and other possible efforts, we believe that spectrum should still be put up for auction whether available in a non-contiguous or partial form.

Also, spectrum trading, sharing and harmonization between operators should be facilitated to eventually try and make contiguity of spectrum possible as this will improve consumer experience in the long run.

Further, at some point in time, Carrier Aggregation within and between bands should also be facilitated, technologically as well through regulation measures.

Q.3. What should be the block size to auction the spectrum in (a) 900 MHz band and (b) 1800 MHz band?

ITU-APT Foundation Response



ITU-APT Foundation of India

The block size of the spectrum for both 900 MHz and 1800 MHz should be kept at 200 KHz. This will ensure the maximum supply of spectrum for the auction. However, contiguous blocks of 5 MHz should be made available, to the extent possible.

Q.4. What should be the minimum quantum of spectrum in the 900 MHz and 1800 MHz band that (a) a new entrant and (b) an existing licensee should be required to bid for?

ITU-APT Foundation Response

We believe that the minimum quantum of spectrum in 900 MHz for new entrant as well as existing licensees should be at least 3 – 5 MHz. It may also be recommended that in case, any operator bids for and acquires 5 MHz or more spectrum in any frequency band, then a contiguous block of 5 MHz should be made available to that operator.

Minimum quantum of spectrum in 1800 MHz for new entrant as well as existing licensees may be kept at 0.6 MHz.

Q.5. Should the licensees whose licences are due for expiry in 2015 and 2016 be treated as an existing licensee or as a new entrant?

ITU-APT Foundation Response

It is submitted that as long as a licensee holds any spectrum in the band being auctioned, it should be treated as an existing licensee. This would also include and apply to licensees whose license are coming up for extension.

Any new entity who does not hold a valid license and would have to obtain a license from DoT (UASL/CMTS/UL), if it wins spectrum in the auction, should be considered as a new entrant.

Q.6. Should the valuation exercise for 1800 MHz spectrum be undertaken afresh for all the 22 LSAs?

And

Q.7. Should the prices revealed in the February 2014 auction for 1800 MHz spectrum auction be taken as the value of 1800 MHz spectrum for the forthcoming auction in the respective LSA? Would the



ITU-APT Foundation of India

response be different depending on whether the forthcoming auction is conducted within one year of completion of last round of auction of February 2014 or later?

And

Q.8. If the prices revealed in the February 2014 auction for 1800 MHz spectrum are taken as the value of 1800 MHz for the forthcoming auction, would it be appropriate to index it for the time gap (even if this is less than one year) between the auction held in February 2014 and forthcoming auction? If yes, what rate should be adopted for the indexation?

And

Q.10. Should the valuation of spectrum and determination of reserve price be done only for those LSAs where market clearing price was not achieved for 1800 MHz spectrum in February 2014 auction?

ITU-APT Foundation Response

Less than six months have passed since the successful conduct of the auction in February 2014. Nothing much has changed both in terms of the economic activity as well as the outlook for the telecom sector during the last six months that would significantly impact the value of spectrum.

Hence, a fresh valuation and estimation of the Reserve Price of the spectrum may not yield valuations that are significantly different from the Authority's Recommendations of September 2013, since the variables and inputs used in different approaches for valuation of spectrum have not changed radically.

Thus, we believe that the 'Reserve Price' recommended by the Authority in September 2013, should be used for the forthcoming auctions as well. There is no need to index the value of spectrum for the short time gap between the auction held in February 2014 and forthcoming auction.

In fact, in case of LSAs where demand was less than supply we would like to suggest that the reserve price for spectrum be suitably reduced (say by 20%) from the September 2013 values. This will serve as a price correction in case of these LSAs and would encourage greater participation.

Q.9. What should be the criteria for defining a 'market clearing price'? Can the auction determined price be considered as market clearing price, when (i) the demand for spectrum is greater than the supply and



ITU-APT Foundation of India

when (ii) the demand is greater than or equal to the supply? Can the auction determined price be considered as the market discovered price?

And

Q.11. Should the auction determined price for LSAs where market clearing price was achieved in February 2014, be taken as equal to the value of spectrum?

And

Q.12. Should the market determined price be taken as the value of spectrum in all LSAs?

And

Q.13. Should the value of spectrum in the LSAs where market clearing price was not achieved be estimated by correlating the sale prices achieved in similar LSAs where market clearing price was achieved with known relevant variables (paragraph 3.19)? If yes, please suggest which single variable is best suited for this purpose?

ITU-APT Foundation Response

In our opinion, a market clearing price can be said to have been achieved if demand was greater than supply and the actual, final price was more than the reserve price.

Also, in our opinion, the value of spectrum in the LSAs where the market clearing price was not achieved, should not be estimated by correlating (with known relevant variables) the sale prices achieved in similar other LSAs, where the market clearing price was achieved.

As submitted above, we believe that the reserve price recommended by the Authority in September 2013 should be used for the forthcoming auctions as well. Also, for LSAs where demand was less than supply, we would like to suggest that the reserve price for spectrum be suitably reduced (say by 20%) from the September 2013 prices. This will serve as a price correction in case of these LSAs and would encourage greater participation.

Q.14. Can multiple regression analysis be gainfully employed for this purpose given the limited number of sample data points?



ITU-APT Foundation of India

And

Q.15. Should the value of spectrum in 1800 MHz band be assessed on the basis of producer surplus on account of additional spectrum?

And

Q.16. Is there any need for a change/revision of any of the assumptions adopted by the Authority in producer surplus model in the Recommendations of September 2013? Justify with reasons.

And

Q.17. Should the production function model based on the assumption that spectrum and BTS are substitutable resources be used as a valuation approach (as was done in the earlier valuation exercise)? Please support your response with justification/calculations/relevant data and results.

And

Q.18. Should the revenue surplus approach be used to arrive at the value of 1800 MHz spectrum? Do you agree with the assumptions made?

And

Q.19. Should the values contained in the Report of 8th February 2011 for spectrum up to 6.2 MHz be incorporated after indexation in the calculation of the average value of the 1800 MHz spectrum in the current exercise?

And

Q.20. Should the prices revealed in the February 2014 auction for 1800 MHz spectrum auction be used as one of the values of 1800 MHz spectrum?

And

Q.21. Apart from the approaches discussed as above, is there any other approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

And

Q.22. Would it be appropriate to value 1800 MHz spectrum as the simple mean of the values thrown up in all the approaches? If no, please suggest with justification that which single approach should be adopted to value 1800 MHz spectrum?

ITU-APT Foundation Response

We reiterate that the reserve price recommended by the Authority in September 2013 should be used for the forthcoming auctions as well. In case of LSAs where demand was less than supply we would like to



ITU-APT Foundation of India

suggest that the reserve price for spectrum be suitably reduced (say by 20%) from the September 2013 prices. This will serve as a price correction in case of these LSAs and would encourage greater participation.

Q.23. Should the value of 900 MHz spectrum be derived on the basis of the value of 1800 MHz spectrum using technical efficiency factors (1.5 times and 2 times) as discussed above?

And

Q.24. Should the economic efficiency approach as discussed above be used to calculate the premium for the 900 MHz spectrum, based on the additional CAPEX and OPEX that would be incurred on a shift from this band to the 1800 MHz band?

And

Q.25. Is there any other method that could be used for arriving at the valuation of the 900 MHz spectrum? Please support with detailed methodology.

And

Q.26. As in the case of the September 2013 Recommendations and adopting the same basic principle of equi-probability of occurrence of each valuation, should the average valuation of the 900 MHz spectrum be taken as the simple mean of the valuations obtained from the technical and economic efficiency approaches (and any other method)?

ITU-APT Foundation Response

We thank the Authority for recognizing and recording the Government policy decision of 15 February 2012, which has confirmed extension of licenses along with a prescribed limit of spectrum or existing allocated spectrum, whichever is less, requiring spectrum only beyond the said limit to be acquired in the open market. We believe that this decision should be honoured and the licenses should be extended along with spectrum at least upto the prescribed limit. The terms and conditions of such extension, including the price for spectrum upto the prescribed limit, may be recommended by the Authority as a part of this consultation.

We suggest that all licences in different LSAs should be made co-terminus. Till such time the issues around the supply side of spectrum are resolved and adequate, contiguous spectrum is made available for



ITU-APT Foundation of India

auction, it is proposed that for licenses that are coming up for extension in 2015-16, should be extended on payment of a reasonable administrative price of spectrum for the intervening period.

As an alternative, a pro rata amount based on the rates determined in February 2014, can be considered to be charged from operators for the intervening period.

We believe that the above approach would help achieve the objectives of continuity & improvement of services as well as fairness/ level playing field for all licensees and also secure appropriate revenues for the Government exchequer.

Q.27. Should the reserve price of 1800 MHz spectrum in the forthcoming auction be fixed equal to the realized price of 1800 MHz spectrum in the February 2014 auction? If not, what should be the ratio between the reserve price for the auction and the valuation of the spectrum?

And

Q.28. If the realized prices in the February 2014 auction for 1800 MHz spectrum is taken as the reserve price of 1800 MHz for forthcoming auction, would it be appropriate to index it for the time gap (even if less than one year) between the auction held in February 2014 and forthcoming auction? If yes, what rate should be adopted for the indexation?

ITU-APT Foundation Response

We reiterate that the reserve price recommended by the Authority in September 2013 should be used for the forthcoming auctions as well. And that in case of LSAs where demand was less than supply we suggest that the reserve price for spectrum be suitably reduced (say by 20%) from the September 2013 prices. This will serve as a price correction in case of these LSAs and would encourage greater participation.

We feel that indexation is not required due to the short time period that has elapsed since auctions in February 2014 and no substantial changes have taken place in economy or the telecom sector during this short period.



ITU-APT Foundation of India

We sincerely hope our observations would be useful in your endeavor to determine the Valuation and Reserve Price of Spectrum

With Best Regards

Yours sincerely,

A handwritten signature in purple ink, appearing to read 'Anil Prakash', with a horizontal line underneath.

Anil Prakash

Secretary General

ITU-APT Foundation of India