

**Reliance Communications Ltd Response to TRAI Consultation Paper on Valuation and reserve Price of Spectrum: Licences expiring in 2015-16**

**Executive Summary**

1. **All efforts should be made to ensure that not only the expiring licensees (184 MHz of 900 MHz and 27.8 MHz of 1800 MHz bands) spectrum but additional spectrum too is made available for auction in both 900 MHz and 1800 MHz bands.**
2. **For creating better quality spectrum, the government should allow re-arrangement of spectrum between TSPs through mutual agreements amongst them.**
3. **Rearrangement of spectrum should be permitted irrespective of the type of spectrum holding.**
4. **All spectrum available with DoT, irrespective of its being contiguous or not, should be put up for auction.**
5. **Spectrum, in both 900 MHz and 1800 MHz bands, should be auctioned in block size of 200 KHz.**
6. **There should be 3 categories of bidders, namely, Existing Operators, Renewal Operators and New Entrants.**
7. **Existing Operators should be permitted to bid for a minimum of 1 Block whereas the Renewal and New Entrant Operators should be mandated to bid for a minimum of 25 Blocks.**
8. **Flexibility for acquisition of 25 Blocks individually in any one of the bands (1800/900 MHz) or in a combination of the bands should be provided to the renewal operator.**
9. **For 1800 MHz spectrum band, irrespective of the fact that the next auction is held by February 2015 or later, the winning price of February 2014 auction i.e. Rs 2270 Cr, should be taken as its valuation in the respective LSAs.**
10. **Indexation of Feb 2014 auction discovered price of 1800 MHz spectrum is not justified in case the auction takes place within one year of previous round of auction.**
11. **'Auction Determined Price' even with partial sale of spectrum in a LSA, should qualify as the 'Market Clearing Price' for that band in that LSA for all purposes.**
12. **The reserve price of 1800 MHz band should be fixed at 80% of its valuation i.e Rs 1816 Cr (80% of the winning price of Feb 2014 Auction).**
13. **The valuation of 900 MHz spectrum should be derived on the basis of the valuation of 1800 MHz spectrum.**
14. **The RP of 900 MHz should be 1.65 times the RP of 1800 MHz as arrived at from the winning price of Feb'14 auction.**

**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.**

**All efforts should be made to ensure that not only the expiring licensee spectrum but additional and contiguous spectrum is made available for auction of 900 MHz and 1800 MHz bands.**

1. The impending expiry of 29 licenses in the near future necessitates and mandates that for continuance and enhancement of services in the best interests of the consumers, all efforts should be made to ensure that not only the expiring licensee spectrum but additional spectrum too is made available for auction in both 900 MHz and 1800 MHz bands.
2. Though the existing services, namely 2G and 3G can be provisioned through the retention of spectrum (via auction) by the incumbent operators, however, in order to enable them to contribute fruitfully in realization of the ambitious vision of 'Digital India' of the current government, it is imperative and obligatory for the DoT to ensure availability of larger amount of spectrum. Despite a MoU having been signed between the MoD and DoT to make available 55 MHz of spectrum in 1800 MHz for commercial purposes, the entire spectrum in some of the LSAs has not yet been made available for commercial exploitation. Similarly, a total of 25 MHz had been earmarked for commercial usage in 900 MHz band but on ground approx 22 MHz has been provisioned. The balance spectrum too should be released as soon as possible.
3. Also, contiguity of spectrum being a basic requirement for provisioning of newer technology based digital services, it is important that all endeavours are made to provide contiguous spectrum with minimal financial implications on the operations of the incumbent operators. **However, contiguity should not be the pre- requirement for auction of spectrum and all available spectrum (contiguous or non contiguous) should be put up/made available for the forthcoming auction.** With only 135 MHz out of the total 184 MHz of spectrum, in 1800 MHz band, that shall be available for auction being contiguous, it is suggested that DoT should be requested to co-ordinate with MoD to ensure adequacy of spectrum availability for the forthcoming auction.
4. It has been rightly proposed in the CP that frequency reconfiguration be resorted to for creating contiguous /additional spectrum for the upcoming auction of 900 MHz and 1800 MHz spectrum. However, it is suggested that the Government should allow such re-arrangements between TSPs on mutual agreements amongst them. Also, the rearrangement of spectrum should be permitted irrespective of the type of spectrum holding with the administrative spectrum holder being mandated to continue with their original services only. It is once again reiterated that contiguity of spectrum should not be the driving factor for auction of spectrum and all available spectrum should be put up for forthcoming auction of 1800/900 MHz.
5. Our Recommendations:
  - a. **All efforts should be made to ensure that not only the expiring licensee (184 MHz of 900 MHz and 27.8 MHz of 1800 MHz bands) spectrum but additional spectrum too is made available for auction in both 900 MHz and 1800 MHz bands.**
  - b. **For creating better quality spectrum, the government should allow re-arrangement of spectrum between TSPs through mutual agreements amongst them.**
  - c. **Rearrangement of spectrum should be permitted irrespective of the type of spectrum holding.**

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

**We do not agree with TRAI's contention that only contiguous blocks of minimum 5 MHz spectrum should be put for auction.**

1. **It is submitted that all spectrum which is available with DoT i.e. contiguous or non-contiguous should be put up for auction.** This shall be consistent with the practice followed in all auctions conducted hitherto fore.
2. **Lack of availability of contiguous blocks of 5 MHz spectrum should not be an impediment for auctioning of spectrum in the 900 MHz / 1800 MHz bands.** It is once again suggested that deliberate efforts should be made for making additional and contiguous spectrum available for the forthcoming auction.
3. Our Recommendations: **All spectrum available with DoT, irrespective of its being contiguous or not, should be put up for auction.**

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

**It is suggested that the spectrum, in both 900 MHz and 1800 MHz bands, should be auctioned in block size of 200 KHz.**

1. Optimal utilization of the limited and fractionalized availability of spectrum, especially in 1800 MHz band, warrants that the block size is such that the flexibility for purchasing fractional spectrum is available with the operators. Accordingly, a block size of 200 KHz is best suited for the same.
2. Given the present amount of availability of spectrum (e.g 4.4 MHz in West Bengal), prescription of a larger block size such as 1 MHz or 5 MHz shall lead to a situation wherein it will not be possible to auction available spectrum in entirety.
3. Our Recommendation: **Spectrum, in both 900 MHz and 1800 MHz bands, should be auctioned in block size of 200 KHz.**

**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?**

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

1. In order to arrive at the minimum quantum of spectrum that should be mandated to be bid by the bidders it is submitted that the types of bidders should not be restricted to just the existing bidders and new entrants. This is necessitated due to the possibility of a post auction situation emerging, wherein the incumbent operators are unable to defend their existing holdings.
2. A closer examination and analysis of chapter 2 of the consultation Paper reveals that,
  - a. The spectrum available for the forthcoming auction is mostly the one that is currently being used by the incumbent operators for provisioning services as on date.
  - b. A scenario wherein the incumbent operators are not able to defend their respective spectrum holding(s) shall result in disruption of services impacting a sizable subscriber base.

- c. There is very little head room available with the operators, due to limited spectrum availability, to take a long term view of provisioning newer technology based digital services in the future.
3. Accordingly, in the best interest of the subscribers, ensuring an equated level playing field and a healthy competition during the auction process, it is suggested that the precedence of NIA of Mar 2013 should be followed wherein the bidders were categorized into 3 categories, namely, Existing Operators, Renewal Operators and New Entrants who are defined as follows,
  - a. **Existing operators** – Those operators who already have some amount of spectrum in that band in that LSA and are likely to participate in the auction process for enhancing their holding with a view to improve their existing services.
  - b. **Renewal Operators** – Those operators whose licenses are expiring in 2015-16, in both the said bands and have to necessarily retain their respective spectrum holding for ensuring continuation of services.
  - c. **New Entrants** – An operator who does not hold any spectrum in that band in that LSA.
4. Based on the above segregation of bidders, the minimum quantum of spectrum, in each band, which should be mandated to be acquired by each type of bidder is suggested to be as follows:
  - a. **Existing Operators** : Minimum 1 Block.
  - b. **Renewal Operators** : Minimum 25 Blocks.
  - c. **New Entrant Operator** : Minimum 25 blocks.
  - d. In view of the limited availability of spectrum and the long term perspective of provisioning digital services using newer technologies, it is also suggested that the renewal operator should be offered the flexibility of acquiring 5 MHz i.e. 25 blocks individually in either of the bands i.e. 900 MHz, 1800 MHz **OR** in combination of 900 MHz and 1800 MHz. The on ground availability of spectrum in circles like West Bengal (wherein the availability of spectrum is only 4.4 MHz and 1.8 MHz in 900 MHz and 1800 MHz respectively) also necessitates provisioning of this kind of flexibility to these operators.
5. Our recommendations:
  - a. **There should be 3 categories of bidders, namely, Existing Operators, Renewal Operators and New Entrants.**
  - b. The mandated minimum block size to be acquired by each type of bidders should be as follows:
    - i. **Existing Operator** : **Minimum 1 Block.**
    - ii. **Renewal Operator** : **Minimum 25 Blocks.**
    - iii. **New entrant Operator** : **Minimum 25 Blocks.**
  - c. **Flexibility for acquisition of 25 Blocks individually in any one of the bands or in a combination of the bands should be provided to the renewal operator.**

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

**Valuation exercise should not be undertaken afresh for 1800 MHz band again for all 22 LSAs.**

1. It is brought out that,
  - a. The exercise for valuation of 1800 MHz band that was undertaken by TRAI is less than a year old i.e. Sep'13.
  - b. For the past few months, there are only positive indications for improvement in economic factors but on ground things are yet to charge.

- c. Most of the Economic factors like trade balance, forex inflows, etc are similar to what they were in Feb 2014.
  - d. An auction has been held for 1800 MHz spectrum band within the past 6 months, hence, there also exists a market discovered benchmark valuation of this band.
2. Therefore, it is felt that a fresh exercise for valuation of 1800 MHz spectrum shall not yield any significantly different valuation from the TRAI's earlier recommendations 11 months ago in September, 2013.
  3. Our Recommendation: **There is no need to undertake a fresh valuation exercise for 1800 MHz band.**

**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 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?**

**Yes, it would be most ideal to consider the prices revealed (Winning Price) in the February 2014 auction, for 1800 MHz, to be taken as its valuation for the forthcoming auction.**

**No, our response shall still be same even if the forthcoming auction is conducted within one year of completion of last round of auction of February 2014 or later.**

1. TRAI in its recommendations dated 9<sup>th</sup> Sep 2013 had used a methodology of simple mean of different approaches, for computing the valuation of 1800 MHz where Rs 2059 Cr had emerged as the valuation of this band
2. Consequently an auction of spectrum in this band has enabled setting of the new benchmark as valuation of 1800 MHz band as Rs 2270 Cr. Consideration of this market discovered price as the valuation of 1800 MHz band shall also ensure transparency and objectivity.
3. It is pertinent to note that some of the existing licenses are due to expire in Dec 2015 and as recommended by TRAI, the auctions should be held at least 18 months before the expiry of the license. Accordingly, the auctions should have been held by now. **Any further delay in auction of the spectrum will have repercussions on the TSPs requiring spectrum.** Notwithstanding that, it is our estimation that the auctions shall be held well before Feb 2015. Since, DoT vide its reference dated 17<sup>th</sup> April, 2014, had sought TRAI's recommendations on the applicable reserve price for all service areas i.e. within 2 months of conclusion of February 2014 auction and only 6 months have lapsed till now, we do not see any reason for the auction being held later than the end of this year (December, 2014).
4. Even if the auction takes place later than this period or after completion of 1 year from the previous auction, due to procedural delays, we do not see any valid rationale which affects the value or reserve price of the spectrum in such a case.
5. Our Recommendation:
  - a. **It would be most ideal to consider the winning price, of 1800 MHz spectrum band, as discovered during the February 2014 auction, to be taken as its valuation for the forthcoming auction in the respective LSAs i.e. valuation of 1800 MHz (for Pan India spectrum) should be Rs 2270 Cr per MHz.**
  - b. **Our response shall still be the same even if the forthcoming auction is conducted within one year of completion of last round of auction of February 2014 or later.**

**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?**

**Indexation of Feb 2014 auction for 1800 MHz spectrum's market discovered price is not justified in case the auction takes place within one year of previous round of auction.**

1. It may be noted that while estimating the value of spectrum in September, 2013, TRAI had indexed the February 2011 prices for 3 years i.e. for a period of 2010-11 to 2012-13 however, it did not index the auction price of Nov 2012 as one year had not elapsed till September 2013 when TRAI's recommendations had been submitted.
2. Additionally, in our response to question no 7, we have already stated that the price discovered during the auction held in Feb 2014, even if the auctions are held after elapsing of 1 year from the date of previous auction should be held valid.
3. Our recommendation:
  - a. **As per the precedence set by TRAI, Indexation of Feb 2014 auction discovered price of 1800 MHz spectrum is not justified in case the auction takes place within one year of previous round of auction.**
  - b. **Feb 2014 auction discovered price of 1800 MHz, even if the auctions are held after elapsing of 1 year from the date of previous auction, should be held valid.**

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

**'Auction determined price' should qualify as the 'Market Clearing Price'.**

1. Conceptually, 'Market Clearing Price' is the price at which demand and supply of commodities balance each other, i.e. it is applicable for goods whose production (supply) can be enhanced / decreased as and when desired. However, since spectrum is a finite quantity, application of this concept for determination of its price shall be flawed.
2. In our view, even if a small amount of spectrum is sold at a given price in an auction to any operator, that 'auction determined price' should qualify as the 'Market Clearing Price' for that service area and should be considered as market discovered price for that band in that LSA for all purposes, till a sufficient time elapses.
3. It is brought out that in LSAs where complete spectrum was not sold and there was some surplus as balance, it should not be construed that market price or the market clearing price was not discovered for that band in those LSAs.
4. Our recommendations:
  - a. **'Auction determined price' should qualify as the 'Market Clearing Price' for that service area and should be considered as market discovered price for that band in that LSA for all purposes, till a sufficient time elapses.**
  - b. **Partial sale of spectrum in a LSA should not be construed as if the market clearing price was not discovered for that band in those LSAs.**

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?

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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?

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

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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?

In conjunction with our response to Q.9 above and the fact that the spectrum was sold in all LSAs as recently as in February 2014, a market determined price already exists for all 22 LSAs that can serve as a basis for any forthcoming auction. Thus, **there is no need of any new exercise for valuation of spectrum & determination of reserve price again.** We therefore are of the view that **market determined price of 1800 MHz should be taken as the value of spectrum in all LSAs.**

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

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

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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.

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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.

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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?

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**Q.19. Should the values contained in the Report of 8<sup>th</sup> 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?**

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**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?**

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**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.**

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**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?**

1. The value of the 1800 MHz spectrum using the simple mean of outcome of multiple methodologies as mentioned in the questions above have already been used by TRAI while recommending the price of 1800 MHz band spectrum vide its recommendations issued in September 2013. Based on this valuation, market prices have already been determined for all 22 LSAs in February 2014 auction (less than a year ago).
2. Calculating the value (mean) of 1800 MHz using TRAI's method of simple mean of different approaches (as used in Sep'13 valuation process), wherein the RP of 1800 MHz of Nov 2012 / Mar 2013 has been replaced with the winning price of Feb 2014 auction, the PAN India value of 1800 MHz spectrum works out to approx Rs 2079 Cr per MHz.
3. On the other hand, if the valuation of 1800 MHz band is taken as per the winning price of Feb 2014 auction, PAN Indian price works out to Rs 2270 Cr per MHz.
4. Applying TRAI's methodology of comparing and taking the RP equal to the lower of the two figures - 80% of the average valuation (using WP of Feb'14 in place of Nov'12/Mar'13 price) OR the winning price in Feb'14 auction, the PAN India RP of 1800 MHz comes out to be Rs 1531 Cr which is lower than the RP arrived at by considering 80% of the winning price of Feb 2014 auction.
5. Our recommendations:
  - a. **Valuation of 1800 MHz for the forthcoming auction should be kept equal as the winning price of Feb'14 auction.**
  - b. **Accordingly, the reserve price of 1800 MHz band should be fixed at 80% of its valuation.**

**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?**

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**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?**



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**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.**

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**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)?**

**Yes, the value of 900 MHz spectrum should be derived on the basis of the value of 1800 MHz spectrum.**

1. TRAI in its recommendations of Sep'2013 had calculated the valuation of 900 MHz by taking the simple mean of technical efficiency factor of 1.5 times, 2 times of average valuation of 1800 MHz and economic premium over 1800 MHz.
2. In this regard, it is submitted that economic premium cannot be calculated/ based on CAPEX and OPEX advantage only. However, True economic efficiency can only be derived by considering additional economic factors like ARPU, customers' purchasing power etc.
3. It can be appreciated that the economic premium for different circles shall be different due to the variance of the factors considered. TRAI in its recommendations dated Sep 9, 2013 had evaluated and recommended RP of 900 MHz to be 1.65 times the RP of 1800 MHz for the 3 metro circles. Since the economic factor like ARPU, purchasing power is less in the circles other than the metros, it is envisaged that the economic efficiency factor (including technical efficiency) for circles other than the metros should be less or at the max equal to that of the metros, i.e. 1.65 times. However, for simplicity and uniformity it is suggested that a single, averaged economic efficiency multiplication factor should be applied to the Feb 2014 auction winning price of 1800 MHz band for deriving the valuation of 900 MHz band across all LSAs.

**Our Recommendations: The RP of 900 MHz should be 1.65 times the RP of 1800 MHz, as arrived at from the winning price of Feb 2014 auction.**

**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?**

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**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?**

**As brought out in our response to earlier questions, it is recommended that the RP of 1800 MHz should be 80% of the winning price of Feb 2014 auction.**

**Indexation is not justified in case the auction takes place within one year of previous round of auction as also explained in response to Q.8 above.**