

TELEWINGS COMMUNICATIONS SERVICES PRIVATE LIMITED
A-38, KAILASH COLONY, NEW DELHI-110048



To
The Chairman,
Telecom Regulatory Authority of India
Mahanagar Doosanchar Bhawan
Jawahar Lal Nehru Marg (Old Minto Road)
New Delhi 110002

14 August , 2013

Kind Attn : Mr. Arvind Kumar, Advisor (NSL division), TRAI

Subject : Response to Consultation Paper on Valuation and Reserve Price of Spectrum

Dear Sir,

Please find enclosed our response to the Authority's Consultation Paper No 06/2013 on Valuation and Reserve Price of Spectrum. We hope that the Authority will find merit in our response and consider our inputs while formulating the recommendation on the subject.

This is for your information and records please.

Thanking you

Yours Sincerely,

(Pankaj Sharma)
Authorised Signatory

For and on behalf of Telewings Communications Services Private Limited

CC: Mr Sudhir Gupta, Pr Advisor (NSL), TRAI

Encl: Telewings's response

Preamble

This submission is made by M/s Telewings Communications Services Private Ltd, a Telenor Group company in response to TRAI consultation paper no 06/2013 on Valuation and Reserve Price of Spectrum dated 23rd July, 2013

At the outset, we would like to congratulate TRAI for issuance of a very comprehensive paper which covers wide ranging issues around spectrum management, valuations and allocations. The paper also analyzes in detail the issues around two rounds of spectrum auctions conducted in November 2012 and March 2013 and what led to failure of these auctions and thereby 'unsold spectrum'. This resulted in DOT's decision to once again refer the valuation and pricing of spectrum to the Authority for suitable recommendations so that third round of auctions in line with Supreme Court orders can be conducted by GOI.

The consultation process – first step

It will be important to start the consultation process by referring to Para 3.9 of the consultation paper where it has been acknowledged that in the recommendations on auction of spectrum dated 23rd April 2012, the Authority had used the prices discovered in the 3G auctions as the anchor price to determine the reserve price for spectrum in the liberalized 1800 MHz band.

The auction of 3G spectrum was held in 2010. It was mentioned in the NIA document for auctions of 3G and BWA spectrum released on 25th February 2010 which is reproduced below -

If a further round of auction for 3G Spectrum or BWA Spectrum takes place within 12 months from the date of completion of the current round or the relevant Auction, the Reserve Price in such a round will be the same as the Successful Bid

- i) We believe that the spectrum valuation methodologies were constrained during last consultation process by repeated reference to above. TRAI's recommendation dated 23rd April 2012 is reproduced below

The final bid price of one auction in a given band shall be the base price for the next auction whenever it takes place, with the rider that it will suitably be adjusted in the event of gap beyond one year.

- ii) The second big assumption was that market will soon be ready to use LTE in 1800 MHz band for wireless broadband experience. The important points missed out were that operators would need much higher spectrum to run LTE and wireless broadband was just taking off in the 3G domain. The market was not ready to experiment with LTE because of lack of demand and ecosystem.
- iii) One of the cornerstones of the DOT Guidelines announced on 15th February 2012 as a precursor to NTP-2012 was that the spectrum will be made available **only through market driven process**. Due to the restrictions mentioned above, the flexibility of market discovery was severely constrained and the 3G bid price as a reference point looked safe to the policy makers.

In the above backdrop, the Spectrum Auction was conducted in Nov 2012 at a very high reserve price which was guided by the points mentioned above. The Quashed Licensees

were perforce required to participate in the Nov 2012 auction to continue their businesses. This was beyond the logic of demand and supply and the 'market clearing price' was never a criteria. The prices so obtained can be termed as "distress purchases" and definitely cannot be termed as a **market driven price**.

Few amongst the many quashed licensees participated in the Nov 2012 auctions. Telewings (Telenor Group Co) was forced to buy spectrum, even though the spectrum was priced at a level much above the market-clearing price (as demonstrated by the amount of unsold spectrum in the auction). While other operators could hold-out for reserve-price reductions.

The Authority has rightfully summarized in Para 1.35 and Para 1.38 that the two auctions held in Nov 2012 and March 2013 were not successful. This establishes that the 'market clearing price' was way above the actual market value of spectrum.

The authorities in charge of the decision making could not have corrected this anomaly although the market response was at variance to the 3G-NIA condition and TRAI recommendation. **This leads us to re-evaluate the policy backdrop which led to such high reserve price.**

We would like to congratulate the Authority in rightfully highlighting this policy issue and market economics in Para 3.18 to 3.29. The issue under consultation " Q.9: Would it be appropriate to use prices obtained in the auction of 3G spectrum as the basis for the valuation in 2013? " is appropriately placed. A course correction is required through public consultation so that the publicly known flawed clause which is not linked to market economics can be corrected.

Level playing field

Telewings participated and rightfully won spectrum in the Nov 2012 auction at a level above the market clearing price, however within a short time of the auction process getting over; another round of auction has started. We would earnestly request Authority to consider that if a lower price is discovered as part of this process, aren't we creating a **non-level playing field at the beginning of the new Unified License regime and shouldn't it be corrected.**

We request the Authority to put its learned mind to address this issue and devise a mechanism to resolve this. We have also tried to answer this question towards the end of our submission.

The issue wise response to the Consultation paper is submitted below:

Q.1. What method should be adopted for re-farming of the 900 MHz band so that the TSPs whose licences are expiring in 2014 onwards get adequate spectrum in 900/1800 MHz band for continuity of services provided by them?

As rightly pointed out in Para 2.17 by the Authority, Sub- 1GHz bands have better propagation characteristics. These bands have been identified as IMT bands and increasingly being used to deploy UMTS in order to reduce the cost of coverage, especially in rural areas. The spectrum sharing in (sub- 1GHz bands) in rural areas will further enhance the usability of these bands to provide host of services by multiple operators.

In view of the above we concur with the Authority's view on re-farming in its recommendation summarized in Para 2.21. Each operator should be limited to a maximum of 5 MHz in Sub 1

GHz band. This will also ensure uniform distribution amongst operators mandated with rural block level rollouts.

Q.2. In case spectrum is to be “reserved” for such TSPs, should it be restricted to licences expiring in 2014 (metros) or include licences expiring afterwards (LSAs other than metros)?

The priority or reservation should be restricted to licenses expiring in 2014 (metros). The licensees expiring in 2015 and beyond have sufficient time to acquire spectrum through auction as per the timelines of their license expiry.

Q.3. Is any restriction required to be imposed on the eligibility for participation in the proposed auction?

There should not be any restriction on the participation.

We believe that all operators must be allowed to compete on equal terms for access to spectrum in all relevant frequency bands. This is in practice achieved by making all expiring spectrum usage rights available in open, fair, and transparent auctions, where spectrum caps prevent large operators from decreasing competition in the market for wireless services by the strategic purchase of spectrum.

Spectrum holding restrictions of 50% in band cap and 25% all band cap should be retained.

TRAI consultation paper rightly acknowledges the pressure on EBIDTA margins and long term financial health of the industry in a 6-10 player market besides acknowledging the comparatively low spectrum holdings. However, this intense competition in the market place has also lead to faster rollout and drop in call charges.

Hence restriction on participation is not recommended.

Q.4. Should India adopt E-GSM band, in view of the diminishing interest in the CDMA services? If yes,

- a) How much spectrum in the 800 MHz band should be retained for CDMA technology?**
- b) What are the issues that need to be addressed in the process?**
- c) What process should be adopted for migration considering the various issues involved?**

We support that the harmonisation and the complete 35+35 MHz should be used for EGSM. The deployed GSM networks support this extra band from 880-890 MHz and should not have any issues other than reconfiguration in the network.

The remaining CDMA band can be used for LTE 850 deployment which has a eco system already available across different countries. This would be a long term approach while existing CDMA networks would phase down and transition can be planned to 850 LTE.

The initial release of 10 MHz for EGSM can be done quite fast than the complete band of 800.

Q.5. Should roll out obligations for new/existing/renewal/quashed licenses be different? Please give justification in support of your answer.

AND

Q.6. Is there a need to prescribe additional roll-out obligations for a TSP who acquires spectrum in the auction even if it has already fulfilled the prescribed roll-out obligations earlier?

While the district level rollouts were defined in the UASL / CMTS licenses of existing/ renewal/ quashed licenses. The block level rollout obligations have been recently introduced for new licenses through the NIA for Nov 12 and Mar 13 auctions. The Government has already taken a view to introduce the district and block level rollout obligations.

District level rollout: Those existing/ renewal/ quashed licensees who have met the obligations should be given credit. As rightly pointed out by the Authority in Para 2.40 (i) there has been no disruption of services in case of quashed licensees wherever they have successfully won the spectrum and therefore going back to the TERM cells to recheck for compliance will only result in bureaucratic delay and additional costs to such TSPs and this should be avoided.

Block level rollout: This should be uniformly applicable to all category of licensees to maintain the level playing field. The monitoring mechanism to differentiate rollout obligation by new spectrum, existing spectrum and incremental spectrum will be difficult, hence it should be uniformly applied, this also ensures level playing field.

However we would like to draw the attention of the Authority to the complexity of this task in view of 10 fold increase in the certifications (number of blocks are approx 10 times number of districts) and also the issues pertaining to non-availability of municipal maps in certain blocks. We recommend that the certification process should be simplified so that the focus should remain on network rollout in rural areas and does not get diverted in meeting the documentary requirements. Therefore we request would request the TRAI to look into the suggestions mentioned below and issue suitable recommendations.

- A simplified process for registration and time bound coverage testing.
- Alternatives for municipal maps / boundaries for block headquarters.
- A time bound approach towards certification by TERM.
- Self certification by the operators should be accepted with 10% sample certification by Term Cells. This will save significant time and effort while maintaining the essence of new rollout guidelines.

Q.7. What should be the framework for conversion of existing spectrum holdings into liberalised spectrum?

Existing service providers should be able to liberalize their entire spectrum holdings after payment of auction determined price for the remaining period of their license. However, the auction discovered price in this round of auction should be used for liberalizing their existing spectrum holdings.

In case market determined price is not available, then the base price in the last concluded auction should be provisionally charged. The balance amount shall be payable once market determined price is discovered.

Q.8. Is it right time to permit spectrum trading in India? If yes, what should be the legal, regulatory and technical framework required for trading?

Presently the liberalized M&A policy is not yet announced. As per the rules of 3G-NIA the TSPs cannot acquire more than 1 block even through M&A in 2.1 GHz and 2.3 GHz band. The M&A clause is reproduced below:

Unless otherwise notified by DoT in due course, if two or more licensees holding 3G Spectrum blocks in a service area merge, then they shall be allowed to retain only one 3G Spectrum block and surrender the remaining 3G Spectrum blocks in that service area.

There is also a mix of administratively allocated and auction acquired spectrum in 800 / 900 / 1800 band which cannot be interchangeably traded.

Hence the possibility of spectrum trading at this stage is premature. In principle we support the policy but the consultation on this issue should be done after clarity on rules regarding migration to UL and Merger & Acquisition.

As and when Authority does a detailed consultation on spectrum trading the following safeguards should be considered to avoid policy pitfalls.

- Trading by Licensed entity only to preempt the situation where Financial Institutions may acquire considerable holding in more than 1 licensee in a service area
- Build adequate safeguards to preempt hoarding of spectrum.

Q.9. Would it be appropriate to use prices obtained in the auction of 3G spectrum as the basis for the valuation in 2013? In case the prices obtained in the auction of 3G spectrum are to be used as the basis, what qualifications would be necessary?

Due to the legacy issues of Clause 4.7 of the 3G-NIA dated 25th February 2010 and TRAI recommendation of 23rd April 2012, the authorities in decision making position did not overrule this clause in their individual capacity. The market economics and behavior between 2010 and 2013 are very different as well as divergent. Few factors which led to very high 3G spectrum prices in 2010 were –

- i) Due to India growth story of preceding five years, lots of liquidity on easy terms was available in market.
- ii) In the high growth years of previous years, spectrum had become very scarce commodity. The networks were choked. Operators wanted to have 3G spectrum at any price, in order to have first mover advantage.

In the last three years, India growth story has undergone complete change and towards negative sentiments. The business plans as projected by operators have not taken off and Industry is saddled with very high debts, loss of jobs, negative growth and mounting losses.

Therefore we strongly believe that the 3G bid price should not be used as the basis of future auctions as has been demonstrated by the results of recent auctions and also acknowledged by the Authority in Para 1.35 and Para 1.38. In our view the anomaly of the clause which is only based on past references and not linked to market economics should be corrected.

Q.10. Should the value of spectrum for individual LSA be derived in a top-down manner starting with pan-India valuation or should valuation of spectrum for each LSA be done individually?

We recommend LSA-wise estimates since there are large differences with respect e.g. to spectrum availability and economic factors. International and Indian benchmarks can be adjusted based e.g. population, license duration, ARPU and GDP per capita.

Q.11. Is indexation of 2001 prices of 1800 MHz spectrum an appropriate method for valuing spectrum in 2013? If yes, what is the indexation factor that should be used?

We do not believe that indexation of 2001 prices of 1800 MHz spectrum is an appropriate method for valuing spectrum in 2013. A general principle of deriving the spectrum price at the time of the auction should be established; not prices established 12 years ago. There is no evidence to suggest that the 2001 prices were “correct”.

In several recent auctions (e.g. India 2012, Romania 2012, Australia 2013) spectrum has been left unsold, indicating that governments have over-estimated the value of spectrum. A possible explanation for this unsold spectrum is that benchmarks, such as prices in previous auctions, are used to estimate future prices.

However, we believe that spectrum scarcity is decreasing as a result of the government's success in freeing up more spectrum for the wireless sector. Technology performance is improving, allowing the transfer of more data per Hz and thereby reduces spectrum value further because improved technology is equivalent to price reduction of a substitute for spectrum (one needs fewer towers to make up for the loss of a MHz). Increased competition in the markets for wireless services reduces expected profits, and, to the extent expected profits drive spectrum valuation, also bidders' willingness to pay for spectrum.

If the trend is that spectrum value (measured on a per MHz level) is declining (as we believe), then such benchmarking will have a tendency to overshoot and to result in value estimates that are too high.

Q.12. Should the value of spectrum in the areas where spectrum was not sold in the latest auctions of November 2012 and March 2013 be estimated by correlating the sale prices achieved in similar LSAs with known relevant variables? Can multiple regression analysis be used for this purpose?

Multiple regression analysis could be of some use, but we would then recommend including data from other countries as well. Multiple-regression analysis would in such a case be comparable to estimation based upon benchmarks.

Q.13. Should the value of spectrum be assessed on the basis of producer surplus on account of additional spectrum? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.

Operators use a number of approaches, including bottom-up estimates and benchmarking. To estimate likely non-strategic market-clearing auction prices, the government would have

to estimate each bidder's marginal valuations (i.e. estimate bidders' spectrum demand curves) and then derive auction prices based on spectrum availability. The uncertainty of such estimates would be very large and we recommend suitably adjusted benchmarking for this purpose.

Q.14. Should the value of spectrum in the 1800 MHz band be derived by estimating a production function on the assumption that spectrum and BTS are substitutable resources? Please support your response with justification. If you are in favour of this method, please furnish the calculation and relevant data along with results.

This is one of the approaches typically used by operators when estimating the (marginal) value of spectrum. It is most relevant when market conditions and technology usage is stable and predictable. It is less reliable when used to estimate the value of spectrum which will be used for more than one technology in the planning period.

Q.15. Apart from the approaches discussed in the foregoing section, is there any alternate approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

Instead of attempting to estimate spectrum value and spectrum prices bottom-up, we recommend a simpler top-down approach where likely spectrum prices are estimated service-area wise based on international and Indian benchmarks. Such benchmarks should be properly adjusted based on e.g. population, GDP per capita, ARPU, license duration, and on differences with respect to annual fees and charges.

Evidence from the 2012 and 2013 auctions suggest that expected market-clearing prices are below reserve prices used in the same auctions. The 2012 and 2013 reserve prices thus constitute an upper bound for any reasonable estimate.

Q.16. Should the premium to be paid for the 900 MHz and liberalised 800 MHz spectrum be based on the additional CAPEX and OPEX that would be incurred on a shift from these bands to the 1800 MHz band?

We propose empirical relative prices from auctions of both 900 and 1800 MHz spectrum as a basis for deriving relative 900 and 1800 MHz reserve prices.

Q.17. Should the valuation of spectrum and fixing of reserve price in the current exercise be restricted to the unsold LSAs in the 1800 MHz band, or should it apply to all LSAs?

Due to the cancellation of its licenses, Telewings was forced to buy spectrum in 2012, even if the spectrum was priced at a level above the market-clearing price (as demonstrated by the amount of unsold spectrum in the auction). Telenor Group supports a reduction of reserve prices in all LSAs conditioned on being reimbursed the difference between the prices paid by Telewings and the subsequently properly discovered market-clearing prices in LSAs where Telewings bought spectrum, if these latter prices turn out to be lower than the excessive reserve prices paid by Telewings.

Q.18.

a) Should annual spectrum usage charges be a percentage of AGR or is there a need to adopt some other method for levying spectrum usage charges? If another method is suggested, all details may be furnished.

b) In case annual spectrum usage charges are levied as a percentage of AGR, should annual spectrum charges escalate with the amount of spectrum holding, as at present, or should a fixed percentage of AGR be applicable?

c) If your response favours a flat percentage of AGR, what should that percentage be?

- a.) Since the market value of spectrum has been extracted in an open auction process, any spectrum usage charge should be minimal to cover the administrative expenses. We recommend that the TRAI recommendation dated 23 April 2012 should be followed. Arbitrage was one of the reasons for the revised TRAI response to DOT reference back dated 12 May 2012

As we migrate to the uniform rate of 1% the possibility of arbitrage and playing with the license conditions will be removed.

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31. The Authority recommends that

A. Licensees who have acquired spectrum only through auction conducted here onwards shall be levied spectrum usage charge only at the rate of 1% of the Adjusted Gross Revenue spectrum.

B. Licensees who have a mix of spectrum assigned administratively and spectrum acquired through auction and Licensees who have been assigned spectrum only through administrative process shall be levied the spectrum Usage charges at the rate applicable on the administratively assigned spectrum and on the entire AGR.

C. In the event the spectrum holder, who falls under „B“ above, pays the current auction determined price for the spectrum that is administratively assigned, then it will be entitled to the payment of Spectrum usage charges at the rate of 1% of the AGR.

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- b.) The spectrum usage charge should be 1% of AGR uniformly across all bands.
- c.) The annual spectrum usage charge as a percentage of AGR should be uniform for the similar quantum of spectrum across all bands on the similar lines as License Fee was rationalized from 1st April 2013.

Q.19. What should be the ratio adopted between the reserve price for the auction and the valuation of the spectrum?

The large uncertainty suggests that reserves should be set conservatively e.g. at 50 % of price estimates. Experience from the Indian 3G auction suggests that the risk of collusion is limited even when marginal valuations are significantly higher than reserve prices. Hence, we recommend a reduction of at least 50 % compared to the excessive reserve prices used in 2012 and 2013.

In continuation to the issue of non-level playing field mentioned in the Preamble, we have included this pertinent issue for consultation and recommendation of the Authority.

Q20: In case the auction determined price in this auction is less than the previously discovered price, the level playing field for those service providers who have participated in the Nov 12 and Mar 13 auctions will be distorted. What should be the mechanism of compensation and its quantification ?

Those players who have been declared successful in the Nov 12 and Mar 13 auctions held 8 months and 4 months respectively should be compensated. This will bring the level playing field at the start of Unified License era. There can be following 2 methods:

- Refund the excess amount.
- Allot unsold spectrum blocks in lieu of the above in the Circles where TSP has already won spectrum
- Ask TSP the various options and go by TSP's preference
