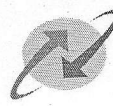


Regulation Cell  
5<sup>th</sup> Floor Bharat Sanchar Bhawan,  
Janpath, New Delhi -01  
Tel.: 011 - 2373 9295, Fax: 2373 4081  
Email : agmregln@gmail.com



भारत संचार निगम लिमिटेड  
(भारत सरकार का उपक्रम)  
**BHARAT SANCHAR NIGAM LIMITED**  
(A Govt. of India Enterprise)  
**BSNL 3G** )))) **BSNL LIVE**  
Faster than your thoughts 2010

To,  
The Advisor (NSL),  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan,  
Jawahar Lal Nehru Marg,  
(Old Minto Road), New Delhi-02

( Kind attention: Sh. Sanjeev Banzal)

No: RegIn/1-25/2013/Vol.1/2666

Dated: 28, Dec, 2015

Sir,  
Sub: - Comments on Consultation paper on "Valuation and Reserve Price of Spectrum in 700, 800, 900, 2100, 2300 and 2500 MHz Bands".

Kindly refer to your office press release dated 26<sup>th</sup> Nov, 2015 regarding Consultation Paper on "Valuation and Reserve Price of Spectrum in 700, 800, 900, 2100, 2300 and 2500 MHz Bands". In this context, kindly find herewith the BSNL comments on the above mentioned Consultation Paper:

**Q1. Whether the entire spectrum available with DoT in the 800 MHz band be put for auction? Justify your answer.**

**BSNL Reply:** BSNL has already surrendered one carrier in 4 LSAs. At present BSNL is providing Voice as well as data services by utilizing two carriers in 16 LSAs, while in 4 LSAs one carrier is being used. BSNL CDMA Voice service serves lakhs of customers especially rural customers and VPTs who have subscribe to this services due to non-availability wired line or GSM. Similarly, the data services are basically providing data services in the area which is not covered by ADSL or GSM Technology, mostly rural area of country. These services are, therefore, providing connectivity mostly rural area of country, where coverage is not available on any other technology. Therefore, carriers which are being using by BSNL CDMA should not be auctioned. Remaining spectrum which is surrendered by TTSL and any other spectrum which is vacant may be auctioned.

**Q2. How can the spectrum in the 800 MHz band, which is not proposed to be auctioned due to non-availability of inter-operator guard band, be utilized?**

**BSNL Reply:** BSNL is using CDMA Technology in 800 MHz band, where inter operator guard band is necessary.

Earlier BSNL has not agreed with re- arrangement of carrier in 800 MHz Band. Due to re arrangement of carriers each and every customer is required to come to BSNL CSCs for reprogramming of IFWT/FWT as OTA facility is not available in BSNL CDMA. Re programming of IFWT/FWT is very big task and entire customers will be affected. In addition to this most of the BSNL CDMA customers are provided through ESN based IFWT without RUIM card which are not supported by OTA. Hence, spectrum without inter-operator guard band should not be auctioned.

**Q3. What should be the block size in the 700 MHz band?**

**BSNL Reply:** The special efficiency of the LTE technology can be really achieved from 5 MHz channel plan onwards only even though technology provides for 1.4 MHz and 3 MHz as well. So, 5 MHz is the barest minimum.

Any operator shall have one lower band (700/800/900) in order to achieve coverage and in-building penetration and at least one more in high band (1800/2300/2600/3500) for capacity. Given the density of Indian cities, restricting the networks to just 5 MHz will be too conservative and will not help in ensuring the QoS and rate of growth through MBB.

The LTE-Adv, which is already rolled in 48 countries. The full potential of such system requires 10 MHz for an operator. Even assuming carrier aggregation of three bands, 5 MHz is too less a chunk for an MBB experience matching with global practices. Considering the above, a minimum of 10 MHz should be allotted.

**Q4. Whether there is any requirement to change the provisions of the latest NIA with respect to block size and minimum quantum of spectrum that a new entrant/existing licenses/expiry licensee is required to bid for in 800, 900, 1800 and 2100 MHz bands. Please give justification for the same.**

**BSNL Reply:** BSNL feels that no need to change the provision of latest NIA in respect of 800 MHz band, i.e. an existing licensee holding spectrum in 800 MHz band was required to bid for a minimum of 1 block (i.e. 1.25 MHz) in this band. A new entrant will required to bid for the following:

- A minimum of 2 blocks, if the spectrum put to auction with 2 blocks.
- A minimum of 3 blocks if the spectrum put to auction with 3 blocks.
- A minimum of 4 blocks, if the spectrum put to auction with 4 blocks or more.

**Q5. What should be the block size in the 2300 MHz and 2500 bands?**

**BSNL Reply:** It should be 20 MHz as it was.

**Q6. No Comments**

**Q7. Is there any need to specify a separate spectrum cap exclusively for the spectrum in 700 MHz band?**

**BSNL Reply:** Considering the already very low availability in 700 MHz band (45 MHz) and also considering requirement for Government services, level playing field etc. a fixed allotment of 10 MHz to 3 to 4 operators could be appropriate. And BSNL, being a government operator, always ready to meet social obligations, it is suggested that BSNL may be administratively allotted the spectrum in 700 MHz band as was done earlier in case of 900 MHz and 1800 MHz allotment.

**Q8. No Comments**

**Q9. Should 2300 MHz and 2500 MHz bands be treated as same band for the purpose of imposing intra-band Spectrum Cap? Please support your suggestions for Q6 to Q9 with proper justifications.**

**BSNL Reply:** Yes

**Q10. Suggest an appropriate coverage obligation upon the successful bidders in 700 MHz band? Whether these obligations be imposed on some specific blocks of spectrum (as was done in Sweden and UK) or uniformly on all the spectrum blocks?**

**BSNL Reply:** Coverage obligation of 800 MHz and 900 MHz may be applied on 700 MHz as all. These bands i.e. 700,800 & 900 MHz are lower frequency bands.

Being a lower frequency band, 700 MHz band has the ability to support wide coverage using fewer base stations/ sites. This band has the features which can be utilized for improving broadband coverage in the remote areas and also in achieving

NTP 2012 broadband targets 'broadband for all'. It is suggested that operator be mandated to roll-out their networks in the villages/rural areas followed by urban area as part of roll-out obligation. It is felt that there is no need for these obligations to be imposed on some specific blocks of spectrum.

**Q11. Should it be mandated to cover the villages/rural areas first and then urban areas as part of roll-out obligations in the 700 MHz band?**

**BSNL Reply:** Considering the opportunity cost and time value of wasted spectrum, coverage obligation is must. Moreover, as 700 MHz band is the main tool with to deliver digital India dream to the rural India, it shall be made mandatory to cover 30% villages with more than 5000 population within first year, 60% in 3 years and 100% in 5 years for all operators.

**Q12. In the auction held in March 2015, specific roll-out obligations were mandated for the successful bidders in 800 MHz, 900 MHz, and 1800 MHz and 2100 MHz spectrum bands. Stakeholders are requested to suggest:**

**(a)** How the roll-out obligations be modified to enhance mobile coverage in the villages? Which of the approaches discussed in para 2.58 should be used?

**BSNL Reply:** it is acknowledged that there is an urgent need to enhance the mobile coverage in villages. The recommendation of the Authority on "Valuation & Reserve Price of Spectrum" dated 9<sup>th</sup> Sep'2013 should be mandated to operators. Further, it is suggested that the licensor/ DoT itself must decide which villages are to be covered as a part of roll-out obligation by individual operator.

**(b)** Should there be any roll out obligation for the existing service providers who are already operating their services in these bands. Please support your answer with justification.

**BSNL Reply:** in case of existing service providers who are already operating their services in these bands, and who acquire additional block of 5 MHz, they may be required to provide additional 10% of district HQ in the LSA within the first and second year each of the date of allotment of spectrum, over and above their existing roll-out obligation in the band.

**Q13. In the auction held in 2010, specific roll-out obligations were mandated for the successful bidders in 2300 MHz spectrum band. Same were made applicable to the licensee having spectrum in 2500 MHz band. Stakeholders are requested to suggest:**

**(a)** Should the same roll-out obligations which were specified during the 2010 auctions for BWA spectrum be retained for the upcoming auctions in the 2300 MHz and 2500 MHz bands? Should both these bands be treated as same band for the purpose of roll-out obligations?

**BSNL Reply:** Yes. Same roll-out obligations which were specified during the 2010 auctions for BWA spectrum be retained for the upcoming auctions in the 2300 MHz and 2500 MHz bands and both these bands be treated as same band for the purpose of roll-out obligations.

**(b)** In case existing service providers who are already operating their services in 2300 MHz band acquire additional block of spectrum in 2300 or 2500 MHz band, should there be any additional roll out obligation imposed on them?

**BSNL Reply:** No, no need to additional roll out obligation imposed on them.

**Q14. Keeping sufficient guard band or synchronization of TDD networks using adjacent spectrum blocks are the two possible approaches for interference management. Considering that guard band between adjacent spectrum blocks in 2300 MHz band is only 2.5 MHz in a number of LSAs, should the network synchronization amongst TSPs be mandated or should it be left to the TSPs for the interference free operation in this band? Please support your suggestion with proper justifications.**

**BSNL Reply:** Interference mitigation should be exclusive domain of each TSPs with frequency allotted to him. Network synchronization depends on business plan of each TSP, which may differ from other TSP. Hence network synchronization among TSP may not be smooth.

**Q15. In case, synchronization of the TDD networks is to be dealt by the regulator/licensor, what are the parameters that the regulator/licensor should specify? What methodology should be adopted to decide the values of the frame synchronization parameters?**

**BSNL Reply:** Interference reduction should be left to TSPs.

**Q16. If synchronization of the TDD networks is ensured, is there a need for any guard band at all? If no guard band is required, how best the spectrum left as inter-operator guard band be utilized?**

**BSNL Reply:** Guard band is required.

**Q17. Whether the ISP category 'A' licensee should be permitted to acquire the spectrum in 2300 and 2500 MHz bands or the same eligibility criteria that has been made applicable for other bands viz. 800 MHz, 900 MHz, 1800 MHz and 2100 MHz band should be made applicable for 2300 MHz and 2500 MHz bands also?**

**BSNL Reply:** As voice service are being integral part of BWA spectrum, ISP may not be permitted to acquire spectrum in 2300/2500 MHz and same criteria of 800 MHz, 900 MHz, 1800 MHz and 2100 MHz band should be made applicable for 2300 MHz and 2500 MHz bands also.

**Q18. Stakeholder are requested to comment on**

**(a) Whether the guidelines for liberalization of administratively allotted spectrum in 900 MHz band should be similar to what has been spelt out by the DoT for 800 and 1800 MHz band? In case of any disagreement, detailed justifications may be provided.**

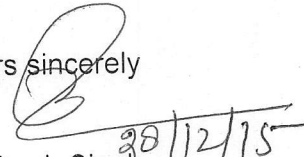
**BSNL Reply:** related to 900 MHz band.

**(b) Should the liberalization of spectrum in 800, 900 and 1800 MHz be made mandatory?**

**BSNL Reply:** It should be optional.

**Q19 to Q30. No Comments**

Yours sincerely

  
Raghuvir Singh  
AGM (RegIn-II)

28/12/15