

## About KMB Consultants

KMB CONSULTANTS, a Dedicated Consultant Group (DCG) comprises a group of senior telecom & IT professionals and visionaries, having extensive and wide ranging experience, say, more than 125 man-year in Telecommunications and IT. KMB Consultants associate actively with Telecom Vendors and Service Providers to understand their business models and provide them expert techno-economic advice on Network Dimensioning, Technology Selection, Project Management, Quality Assurance, Customer Care, Billing Solutions and Regulatory Issues.

KMB has special expertise on the matters pertaining to Telecom Licensing, Spectrum Management, Telecom Regulations, and Benchmarking Quality of Service (QoS) Parameters. In addition to this, KMB has specialized experience in Technical Standardization and Training. KMB has distinction in rendering consultancy to Telecom Regulatory Authority of India (TRAI) on customer care services on the basis of global competitive bidding. Implemented a World Bank funded project for Bangladesh Telecom Regulatory Commission (BTRC), Dhaka on Technical Standardization, Benchmarking QoS Parameters, Issuance of Regulation through consultative process and Training. BTRC project was awarded to KMB through global competitive bidding on the basis of Quality and Cost Based Selection (QCBS) criteria.

## **COMMENTS ON ISSUES IN CONSULTATION PAPER ON AUCTION OF SPECTRUM**

**Q1. How can the various principles outlined by the Hon'ble Supreme Court in various observations brought out in para above be sufficiently incorporated in the design of spectrum auction?**

No comments

**Q2. What are the key objectives to be kept in mind in the auction of the spectrum?**

- a. Spectrum should be delinked from the license.
- b. Spectrum auction policy should be promotional in nature and revenue considerations should play a secondary role.
- c. The process of allocation of spectrum should enable fair competition, efficiency, affordability and protect consumer interest.

- d. Spectrum allocation should encourage the introduction of green telecom technologies having lower power consumption minimal harmful and spurious radiations etc
- e. Spectrum pricing and allocation should ensure introduction and promotion of spectrum efficient technologies.
- f. 400,700,800 and 900 MHz spectrum bands should be exploited for Broad Band and 4 G technologies after getting them vacated from the present users.
- g. 15MHz (1787.5-1802.5MHz) unused guard band of GSM 1800 should be included in the 2G auction as now the TDD technologies are available to work in this band with out any interference with the GSM 1800 systems and accordingly NFAP-2008 has earmarked this band for commercial exploitation vide IND 52.

**Q3. What should be the amount of spectrum which should be auctioned?**

The available spectrum in 1800 MHz band i.e., 1710-1785MHz paired with 1805-1880MHz including its guard band i.e., 1785-1805 MHz should be auctioned together.

**Q4. Should the spectrum be liberalized before it is put to auction?**

The auction of spectrum for 2G services should be based on technology neutrality i.e., in line with the existing UAS License guidelines.

**Q5. For the refarming of 800 and 900 MHz bands from the existing licensees, which of the three options given above should be adopted? Please elaborate with full justification.**

Second option seems to be reasonable.

**Q6. What are the issues that may arise in the above mentioned refarming process?**

No comments.

**Q7. For new technologies e.g. UMTS/LTE, 5 MHz is the minimum amount of spectrum required. Certain licensees have only 4.4 MHz spectrum in 900 MHz band and 2.5 MHz spectrum in 800 MHz band. What are the possible options in case of such licensees?**

The new technologies should not be restricted to UMTS/LTE. When the spectrum refarming exercise is completed for 800 & 900 MHz, this question will not be relevant as the entire band will be available for auction.

**Q8. Some GSM spectrum allocations may be interleaved between operators; to avoid fragmentation, reconfiguration between operators may be required. Whether frequency reconfiguration is required and what are the challenges and possible solutions?**

No comments.

**Q9. Should the refarming of spectrum in 800/900 MHz bands be dealt independently or should a comprehensive approach be adopted linking it with the availability and auctioning of 700 MHz band?**

No comments.

**Q10. Which of the two approaches outlined above be adopted?**

Second approach.

**Q11. When should 700 MHz spectrum be auctioned?**

It should be done after the auction of 1800 MHz band is over.

**Q12. Should the auction in 700 MHz band be linked with the granting permission for the liberalised use of 800/900 MHz band?**

No comments.

**Q13. How much spectrum in 700 MHz band should be put to auction initially and what should be the amount of spectrum which a licensee should be allowed to win in that auction?**

Five blocks of 10MHz each for TDD technologies should be auctioned initially.

**Q14. What should be the structure of the auction process?**

- a. For 1800 MHz band the auction should on the same pattern as was done for 4<sup>th</sup> cellular operator in 2001.
- b. For other bands such as 700MHz, it should be done on the lines of BWA auction.

**Q15. Should auction be held in single stage or multi stage?**

Multi stage as was done for the 4<sup>th</sup> cellular operator in 2001.

**Q16. Should there be a simultaneous auction for spectrum in 800 and 1800 MHz bands?**

No.

**Q17. What should be the block size of the spectrum?**

- a. In 1800 MHz band the block size 4.4 + 4.4 MHz for FDD systems.
- b. In the GSM 1800 guard band i.e., 1785-1805 MHz, 5MHz block should be allocated for TDD systems because only TDD systems can work in this band.
- c. For 800MHz CDMA system, it should be 2.5 + 2.5MHz

**Q18. Should the block size be dependent on the frequency? If so, what should be the block size in each band?**

It should be dependent on the type of system i.e., FDD or TDD. It should not be dependent on frequency band.

**Q19. Should there be a cap on amount of spectrum one can bid? If so, what should it be?**

Yes, it should be 4.4 + 4.4 MHz for FDD systems, 5 MHz for TDD systems and 2.5+2.5 MHz for CDMA systems..

**Q20. Should there be a separate cap on the total amount of spectrum one can hold; if so, what amount should it be?**

6.2 + 6.2 MHz for FDD and 10 MHz for TDD systems.

**Q21. Should there be a cap on the amount of spectrum one can hold in respect of sub-GHz spectrum? If so, what should it be?**

The sub- GHz spectrum should be used only for TDD systems and the cap should be 10 MHz block.

**Q22. Who all should be eligible to participate in the auction?**

- e. Only licensees whose licenses have been cancelled;
- f. Only eligible applicants as on 10.01.2008;
- g. Only licensees whose licenses have been cancelled and all new eligible entrants at the time of auction; or
- h. Open to all including the existing Licensees.

Option( f ) i.e., Only eligible applicants as on 10.01.2008.

**Q23. What should be reserve price per MHz of spectrum in the year 2012 for 1800 MHz band?**

Keeping in view the principles of level playing field among incumbent and new operators, it should be market determined price as was done for selection of 4<sup>th</sup> cellular operator in 2001

**Q24. What should be the reserve price per MHz of spectrum in the 700/800/900 MHz bands.**

It should be the same as that of BWA auction.

**Q25. Whether the reserve price should be uniform across the country or service area wise?**

It should be service area wise.

**Q26. What should be the roll out obligations linked to the auctioned spectrum?**

It should be same as that of 4<sup>th</sup> cellular operator.

**Q27. What should be the annual spectrum usage charge for the spectrum being auctioned?**

5% of AGR uniformly.

**Q28. Should the spectrum usage charge be in line with present criteria of escalating charge with the amount of spectrum holding or a fix percentage as was done for 3G and BWA spectrum?**

No, it should be fixed percentage.

**Q29. What should be the period of validity of spectrum?**

20 years.

**Q30. What should be the period of price of spectrum?**

20 years.

**Q31. Should the government allow deferred payment schedule of the spectrum auction fee, or should the payment be upfront in nature?**

Both the options be offered during auction.

**Q32. Should Spectrum trading be allowed in India?**

Yes, in the interest of effective and efficient use of scarce natural resource and also to provide exit route to operators.

**Q33. (a) Among the various models discussed above, in your opinion which model of spectrum trading is best suited for India?**

No comments.

**(b) In your opinion is there any other model which can be implemented in India? If yes, please describe.**

No comments.

**Q34. What should be the eligibility criteria to trade the spectrum?**

No comments.

**Q35. Whether the spectrum assigned for 3G and BWA services be allowed to trade? If yes, give reasons.**

No. It has already been decided in the auction process.

**Q36. Can spectrum be allowed to be mortgaged for raising capital for telecom purposes?**

Yes It is in the interest of growth of telecom.

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