

TELECOM REGULATORY AUTHORITY OF INDIA

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TRAI releases

Recommendations on

'Allocation and Pricing for 2.3-2.4 GHz, 2.5-2.69 GHz & 3.3-3.6 GHz bands'

New Delhi :- TRAI today released recommendations on **'Allocation and Pricing for 2.3-2.4 GHz, 2.5-2.69 GHz bands, & 3.3-3.6 GHz bands.'**

The Authority had sent its recommendations to the Government on **"Allocation and pricing of spectrum for 3G and broadband wireless access (BWA) services"** on 27th September, 2006. When the Authority gave its recommendations, the spectrum in the 2.3-2.4 GHz and 2.5-2.69 GHz bands was not available for allocation and therefore, the Authority had then recommended that allocation and pricing methodology of spectrum in these bands would be decided as and when these are made available.

In view of the fact that recently, in World Radio Congress-07 (WRC-07), these bands have been identified as International Mobile Telecommunications (IMT) bands and that spectrum in these bands is now available for allocation for the BWA services, the Authority has given these recommendations.

Based on technological advancement, and the availability of spectrum for allocation, the Authority had issued consultation paper on 2nd May 2008. Based on the comments received from the stakeholders and in-house analysis, the Authority has formulated its recommendations on this subject. The gist of recommendations is as follows:

1. **For the spectrum bands of 2.3-2.4 GHz, 2.5-2.69 GHz and 3.3-3.4 GHz, UASL, CMSPs and Category 'A' & 'B' ISPs should be eligible for participating in the auction for the spectrum.**
2. **The leftover spectrum in 3.3-3.4 MHz band after migration to circle level operation should be auctioned to other service providers in blocks of 2x7 MHz, so as to ensure level playing field with the existing service providers. Those service providers who already have 2x7MHz spectrum and are migrating to Circle level operation as required, shall not be eligible for participation in the auction.**

3. The existing service providers having less than 2x7MHz spectrum in this band will have the option either to continue with the existing spectrum OR participate in the auction process for 2x7 MHz spectrum after submitting an undertaking to DoT that in case they are successful in the auction, then they will surrender the spectrum already held by them.
4. In the 3.3-3.4 GHz band, the mode of operation, i.e. FDD or TDD shall be left to the service provider. The Authority in its earlier recommendation has preferred the allocation of spectrum in the TDD mode. However, as some of the service providers have already started operation in this band using either TDD or FDD mode, hence the Authority do not want to specify any one mode in line with the policy of technology neutrality.
5. Authority has decided not to make any recommendation for 3.4-3.6GHz unless DoT assess the compatibility of satellite based services with the terrestrial BWA services and a detailed analysis is done in a transparent and time bound manner. Once DoT carryout the above study and reaches a conclusion that spectrum in the 3.4-3.6GHz band is possible to be refarmed, then it should refer the matter to TRAI for recommending the allocation methodology.
6. A maximum of 15 MHz of spectrum (in 2.3 GHz and 2.5 GHz combined) should be allowed to each service provider in the bands of 2.3-2.4 GHz and 2.5-2.69 GHz. However, the spectrum shall be auctioned in blocks of 5 MHz each so that any service provider requiring lesser amount of spectrum than 15 MHz may not be at a disadvantage.
7. The reserve price and performance bank guarantee for 15 MHz of spectrum in the bands of 2.3-2.4GHz, 2.5-2.69GHz and 3.3-3.4GHz spectrum shall be as below:

Circle	Reserve price (for 15MHz)(Cr Rs)	Performance Bank Guarantee (for 15MHz) (Cr Rs)
Metro & Category A	60	30
Category B	30	15
Category C	10	5

8. **The existing service providers in the band 3.3-3.4GHz shall also have to pay the same price as will be charged from the new entrants. For the Circles where no spectrum is available due to all spectrum already assigned, the service providers of that service area shall have to pay the highest bid price obtained in the other service areas of that category.**
9. **For allocation of spectrum band in 2.5-2.69GHz band, the Authority recommends the following:-**
 - **DoT/WPC should coordinate with Department of Space (DoS) and ascertain the feasibility of vacation of additional spectrum in this band in a time bound manner, say 45 days.**
 - **In case, there is possibilities of vacation of spectrum in this band and with the then vacated spectrum and the present 40 MHz spectrum, if WPC finds it feasible to harmonize with internationally accepted band plan then spectrum in this band may be allocated accordingly in both FDD and TDD modes.**
 - **In case, DoT/WPC comes to the conclusion that no additional spectrum can be made available by vacation / refarming, then the spectrum may be allocated in TDD mode with block of 5 MHz each subject to maximum limit 15 MHz spectrum (cumulative for 2.3-2.4GHz & 2.5-2.69GHz) per service provider.**
10. **The cumulative holding of spectrum acquired in 2.3-2.4GHz and 2.5-2.69GHz band by a licensee shall not exceed 15 MHz of spectrum.**
11. **Simultaneous ascending e-Auction method may be used for auction of spectrum in BWA bands. The auction will be done in the blocks of 5MHz each and any bidder can bid for one or two or three blocks (i.e. maximum up to 15MHz in block of 5MHz). However the bidder has to specify before the auction, the number of blocks he desires to bid for. After the conclusion of the auction process, the highest bid obtained for 5MHz block shall be declared and all successful bidders shall have to match the highest bid. In case any service provider desires to have contiguous block of 5MHz then he should be asked to pay highest bid price of 5 MHz block for the first 5**

MHz block and 1.25 times the highest bid price of 5MHz block for each contiguous 5 MHz block. The option to take contiguous block shall be given based on the ranking of the service providers in the auction process.

- 12. The Authority reiterates its earlier recommendation of charging an additional step up annual spectrum fee of 1% of total AGR from the service providers providing BWA services..**
- 13. The Authority reiterates its earlier recommendations on the rural rollout obligations so as to encourage faster penetration of broadband services in rural areas.**

As the Authority was finalizing its recommendations, DoT vide its letter dated 1st July, 2008 requested the Authority for its recommendations on certain modifications proposed in TRAI's earlier recommendations of 27th September, 2006 on '**Allocation and Pricing of spectrum for 3G and BWA services**'. The issues referred in this letter were 'Eligibility, Amount of spectrum to be allocated, Reserve price & performance bank guarantee, Auction process methodology and Extension of License of the successful bidders'.

The Authority, while framing its recommendations, has also addressed the issues referred in the DoT's letter. A separate reply of this letter is also being sent to DoT.

The recommendations and the response to DoT's above letter are placed on TRAI's website <www.trai.gov.in>

Contact Details in case of any clarifications

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